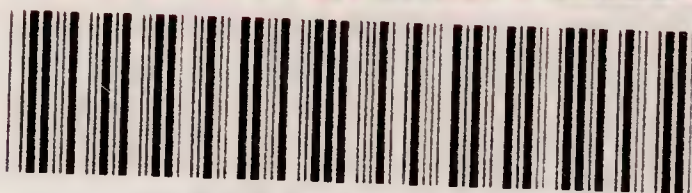


MEDICAL

HOUSEHOLD SKETCHES



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M E D I C A L
HOUSEHOLD SKETCHES ;

OR,

P O P U L A R T R E A T I S E S

FOR

PARLOUR AND BUSH-HUT

ON THE

Diseases Prevalent in Australasia.

BY DR. LOUIS L. SMITH, M.P.

Extracted from Articles written by Dr. Smith in the "Australian Journal," under the name of "Colonial Lancet."

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P R E F A C E .

IN issuing this little work to the Australian public, I wish it to be clearly understood that the articles are extracted from that useful work, the *Australian Journal*, for which, at the request of the proprietors, I have had the pleasure of contributing a paper for these last few years. They have been sketched during the spare hours I have had, and I have been encouraged to reprint them in this collected form from the fact that the editors of that journal have told me that they have had repeated correspondence from their subscribers, couched in terms of approbation of the familiar and popular manner with which the various subjects have been treated. I therefore thought it would not be considered presumptuous in my issuing them in this condensed form. I must acknowledge that these articles are

but light and sketchy, yet, at the same time, they contain all that it is necessary to know, in regard to the climate of these colonies, to everyday life, &c.; and as to the mother, I hope the plain directions I have given will help her to rear, and in the case of disease save her little darling's life. With these few words I may close my remarks, briefly stating that I have, at the request of a large number of my friends, entered into general practice, opposite Melbourne Club, Collins-street East.

LOUIS L. SMITH.

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MEDICAL AUSTRALIAN HOUSEHOLD SKETCHES.

ON GOUT.

“WHAT may I drink, doctor?” is frequently asked me in this colony, and chiefly by gentlemen of rubicund visage, and treading rather gingerly on the hard pavement. My answer to that important question, when asked, is the same as *Punch’s* advice to persons about to marry—“Don’t.” “Well,” say most of my questioners, “that is all very well, doctor, but it is the custom in this colony—‘and pity ’tis, it is,’ to be compelled in business either to ask your neighbour to drink, or to drink with him; and as I must imbibe, and get a reminder of it in my big toe every now and then, I want to know what poison is the least injurious to me, a gouty subject?” Now, in order to answer this question, I ask you to use your own judgment and experience, if you are a gouty subject; but if you are only an embryonic one

and don't know anything of the matter, I will tell you what to avoid. Don't take beer, eschew port wine and the sparkling No. 2, yecept champagne; for therein lurks the enemy, who makes his presence known by the screw he puts on. By the way, you who have not known what the gout is, listen to what a sufferer compared it to, and avoid it accordingly. He said—"Put your big toe in a vice, and screw it so that you can bear the pressure no longer—that's rheumatism; then give the screw another turn or two—that's gout." Beer is the friend of gout, if not its parent. Now though, doubtless, gout is an aristocratic disease, still it attacks the poor of England, and will shortly twist the toes of our colonial beer-drinking gumsuckers, who for the most part affect "Castlemaine," "Wild's," *et hoc genus*; whilst, on the contrary, the whiskey-drinking population of Scotland and Ireland are nearly free from gout.

Port wine, known to our forefathers as Mundungus, but which at present I recognise as a villainous decoction of logwood, or elder-berries, and other colouring rubbish, with bad British brandy, is, both on account of the gout and good taste, the worst drink a man can put into his stomach; and one of the most ridiculous spectacles, in my eyes, is to see a man with the usual modicum of brains so far forgetting to use them as to hold up to the light a

glass of this bright-coloured mysterious compound, close one eye, smack his lips, steadily look at it, and exclaim, "This is the right sort, my boy ; this will keep body and soul together, and the doctor from the door." Quite the reverse, my friend. That very port wine is the little seed sown from which is to spring the plant, gout. When our forefathers drank claret and the lighter wines of *la belle France* and the Rhine, they seldom had gout. Champagne, and all fermented, especially half-fermented and sugary wines, must be avoided.

And now about the important question, What shall I take if compelled to drink? Take whiskey. A nobbler of whiskey and a tumbler of cold water will be the least injurious to a gouty or any other man. Next to that, good old Hennessy's or Martell's brandy, but avoid the sweetened spirits ; clarets, aged colonial wines, Rhenish wines, may be taken with impunity—these wines contain, certainly, a subacid, but that very acid assists materially in the digestion of food.

Having purposely digressed in order to answer an every-day annoying question, I at once come to my subject. What is gout, and whence its derivation? The term gout is from *goutte*, a drop, as it was supposed to drop from the blood into the joints. Gout is brought on from two causes—the first is, trans-

mission from the parent; and the second, an excess of nutritive matter.

The reader of this article must understand that I am greatly condensing, and making my article as lucid as possible. The reason I have chosen gout for my initiatory article is because, meeting with so many gentlemen suffering acutely from that disease, I have made it my especial study to see if some new idea might not originate, by which, at least, some amount of relief can be given to them, and a slight departure from the ordinary routine treatment lead to an alleviation of their sufferings. If, therefore, some of my views do not coincide with those generally accepted, allow me to say I am not responsible. I have not copied from books, but have attempted to give here my own definition—after hard study and research, combined with a fair amount of practical experience, the result of intercourse, in and out of practice, with what are termed “fast men,” and such as have “made the pace too hot” in their youth.

Well, then, I ascribe the origin of this disease to the two first causes; still, in doing this, the question has often resolved itself in my mind—Cannot these two be narrowed down into one, namely, a peculiar inherency in the constitution of certain individuals to run into the disease known as gout? in plain

terms, *certain persons are predisposed to this disease.* I illustrate my position thus—That, no matter how high many individuals may live, no matter how dissipated they may be, no matter how rich, sugary, or fermented or fermentable their diet may be, they cannot by any possibility be attacked with this nipping enemy. They may show all the symptoms of overfeeding or high-dieting, producing a tendency for inflammation, plethora, corpulency, but no twisting at the toe, &c.

But, in opposition to this, we find that even the most abstemious is attacked with this merciless foe; on enquiry, however, you will find that his father, grandfather, &c., had the disease. Though you cannot attempt to exterminate the one, you know that excess of nutrition will produce this, in the majority of cases, where there is no hereditary taint, and therefore Abstinence is the sheet-anchor on which to found your treatment, and in which the general mass of the public can find, by bitter experience, that they can outwit the doctor. Not in all cases, however; of that anon. Do not forget that

“Some man’s wit
Found the art of cookery to delight his sense.
More bodies are consumed and killed with it,
Than with the sword, famine, or pestilence.”

Now, what is an attack of gout? I daresay this

seems easy to answer; so it would be, if I were simply to content myself by saying that it is known by the following symptoms—namely, that about two or three in the morning, usually, the patient is awakened by an excruciating pain, generally in his big toe, near the ball of it. He feels himself feverish for about eighteen hours, and his great toe looks swollen, red, and shiny; he then has pain for a few days; the disease declines, the upper skin peels off, the patient perspires freely, the part itches, *et voila tout!*

I say you would be contented with this, but I am not. I wish you to look upon this disease as purely a constitutional disturbance, brought on by natural morbid causes, just as natural as, if you take too much drink overnight, and gorge yourself with some rich food, you will suffer from “that salmon,” in the shape of a headache. Now, the reason you have that headache is from sympathy with the disordered stomach, nothing more nor less. In plain words, then, this attack of the gout is a constitutional disturbance tending to an inflammatory disease.

A man with gout generally tells you that he enjoyed perfect health before the attack. Don't believe him. He must either have been very careless of himself, and overlooked *his condition*, or he took for granted that, because he did not have some

marked disease or symptoms of disease, he must have been healthy; but health means a perfect harmony of action in the functions of the organs of the body. Now, my friend with the gout, mark me well. I began by telling you that one of the causes of gout was redundancy of nutrition; well, remember that nutrition is only derived from the nutritive matter you put into the stomach, and the want of exercise and sweating to carry it off. Clearly understand me. I do not mean that, in *every* instance, it is because the sufferer has taken too nutritive an article of diet, he suffers; no, because I am well aware that some men's body or constitution is so sensitive or peculiarly susceptible to certain agents, that the introduction of any one element may so set in action a train of symptoms all determining to one point, and so alike, that I can only compare it to the introduction of the venom of the snake *into the blood*, producing a given set of symptoms.

Still it is sufficient for my purpose here to say, that the excess of nutrition produces this disease, while the patient may have no symptoms of excess in his body externally, for he may be thin, &c.; but, remember, there are two ways in which this excess shows itself. For instance, where an excess of a certain material has taken place in the blood, this

will not demonstrate itself always, as in fatness, strength, red cheeks, &c., but we shall find an over-excited system; the result of which will be that the organs cannot stand this excess of energy, the heart will lose its power of action, the pulse will fall, and languor and debility will result; if this continues for any length of time, we get loss of power in the circulatory system, and then every symptom of inflammation will follow.

This is the case, you see, of a weak man, and yet I call him a man suffering from a redundancy of nutrition; but the very symptoms I have last described really demonstrate what brings on gout; for the latter is only a mass of symptoms culminating in local inflammation, *i.e.*, the big toe, or other part. Now, I am fully aware of the fact that I am not allowed to transgress, and limited to space, and that, therefore, I must not here give a treatise of an elaborate character; I content myself by at once going into the cure of it, and the first thing we ask—Is this disease curable?

Well, in order to answer that we must find out whether there is any material increased or diminished in the blood of the individual attacked; and then, if there is (and we find that similarly attacked individuals have the same increase, and that when they do not have this, they do not have an attack), we

have two things to do—firstly, to ascertain how this matter accumulates, and to prevent its doing so; and if it accumulates, to get it out of the system.

Is there such a material, then? Yes—that material is urate of soda; but this latter addition I believe to be the result of persons so suffering of taking carbonate of soda, the soda acting on the acid in the water, known as uric acid. In this popular treatise I am debarred from entering minutely into the subject, but I may here state that this material in the blood can be ascertained by the following process, recommended by some distinguished writer whose name I forget. You place in a flat glass dish a teaspoonful of the fluid part of the blood; add a few drops of acetic acid; take some of the unwashed rough fibres from a huckaback towel and place in this fluid; leave them there for two or three days, and if there is excess of uric acid, it will crystallise on the linen fibres. Now, this is an easy means for any one to determine if his blood be gouty or not.

We now understand that this disease is the result of a morbid material in the blood, and, therefore, also in the tissues of the body. Now, this being the case, the remedy is obvious—to get rid of it. Yes, but remember another thing, you must do more—you must prevent its accumulation, if you can.

Well, can you? No, not in the man whose disease is hereditary—that is, transmitted from his parent; but you can in the gourmand, the beer-drinker, and the high-feeder who takes no exercise. In the latter, by abstinence, you can prevent its accumulation, but, at the same time, you must give such a diet as to sustain the strength of your patient or friend.

I firmly believe that shortly, by the general diffusion of knowledge acquired by attending lectures on physiology, by reading popular works on the human frame, people will become sufficiently versed in the physiology of the digestive organs to know that it is not what we put into our stomachs that does us good, but what we digest; that the amount of food really required to supply the waste of tissues is very small, especially where but little exercise is taken. Many a man gives himself credit by saying, "Oh, I live abstemiously enough," whereas the truth is, he, so far as regards the wants of his system, is a perfect gourmand. Habitual temperance, then, is the golden rule to prevent the accumulation of this poison.

But when there, how get rid of it? Ay, there's the rub. Well, the best remedy I can suggest is the Turkish bath as a permanent cure, and always at hand, both as a preventive and remedy. The reason is obvious. You have an accumulation of poison in

your system: sweat it out. A man enters a Turkish bath (I have two every week of my life); he is enveloped in hot air to the extent of say 170 degrees. The consequence is that the blood rushes to the cutaneous surface; the whole of the capillaries are at once circulating the blood. The pores throw out the water; that water holds in solution a large mass of these salts (as can be tested by simply putting your tongue to your skin for one second when in the bath); and thus with but small effort, and in great comfort, you easily get rid of the morbid matter.

In addition, also, there is something in intense heat thus suddenly applied to and retained against the surface, which goes beyond my ken, but which, at the same time, most effectually relieves pain. This agent, in the relief of gout, or any other disease, has not been sufficiently appreciated.

Remember, then, that the skin is one of the organs which must be used for the elimination of this poison. And, as to general treatment, rely on your common sense. You know that you have an inflammatory disease to treat, either in your own or a friend's case, and therefore must act accordingly; you must get each organ to perform its functions properly. Of course, in a first attack this cannot be done, but even then it must operate well—relieve the pain, and lower the beating, inflam-

matory pulse. This can be done also with colchicum. That medicine has a sedative action, and, *properly administered*, in conjunction with other remedies, is the best mainstay we have. But I particularly lay stress on the words, “properly administered,” for my experience has shown me that there are few medical men who pay sufficient attention to THE DOSE, and the CAPABILITIES OF THE PATIENT TO BEAR IT.

For instance, many persons imagine that colchicum does no good unless as a purgative. This is a fallacy, and I often administer the remedy merely in its sedative form. Now, I always give a mixture of sulphate and carbonate of magnesia first; and, when the bowels are well acted on, I give my colchicum—but not alone. I combine with it iodide of potash and tincture of guaiacum, with the greatest good effects. But remember that the dose must be proportioned to the strength of the patient, to the history of the case, and the surrounding circumstances; I would warn the reader against all “specifics.” Indeed, there cannot be such a thing as a “specific,” for the gout, so-called, is but the result of disordered functions—a predisposition, and an excess of nutrition, culminating in an inflammatory condition of the body.

Common sense will and must tell the unfortunate

victim that the only way to heal the disease is first to remove the cause, and then treat the existing symptoms; and thus, by at once acting judiciously, you make a thorough and permanent cure, and not give a mere temporary relief. How many nostrums are there, with huge certificates floating about, certifying their writers were cured by such and such a remedy, whereas they were only temporarily relieved by some violent drastic medicine, which, by its violence and severe shock to the system, has driven rudely out the excess of uric acid, only to leave the patient a mere shattered wreck.

'Tis true, a few are cured, and the names of these are paraded; nay, there may be some few who, having received so great a shock to their system, have had their constitution totally changed; and, by a fortuitous circumstance, have thus never had a recurrence of their malady. But this is after the manner of the operation which was successfully performed with a butcher's knife; or the man that was suddenly cured of paralysis by his house being on fire. Would you like to try the experiment, had you paralysis, by having your house set on fire, with the chance of losing your life if you did not thus recover?

I ask you, then, not to be deceived by any nostrums, no matter how they may be puffed. These

remedies can all be put down as violent, and of the "kill-or-cure" sort, only with the difference, that, instead of killing (which, in many cases I know of, would have been a mercy,) they have produced a lingering, weakened, diseased object, and cure has not been effected.

I may, in conclusion, state, that if the patient has courage to do it, he will find great relief in the pain in his foot if he will take strips of plaister and strap the whole foot firmly, commencing at the sole, and tightly binding the plaister evenly over the whole inflamed surface; this requires courage for the first half-dozen strips, but relief will follow nearly simultaneously. "*C'est le premier coup qui coute.*"

ONLY A COLD.

AH CHITZA! ah chitza! "Oh, dear me, what a cold I've got. I'm sure I'll sneeze my head off before I've done." This is often said by a puffy-faced individual, with slightly bloodshot, codfishy eyes, running nostrils, weary, stale look, and hot, dry skin, yet shivering body.

Well, my friendly reader, this condition of body is that which chiefly leads to functional derangement of some internal organ, ultimately to organic disease, and frequently to death. "Ah, but," says this individual, "it's only a cold; it will soon go away, and I'll be all right." But suppose the cold does not go away altogether, what then? Why, then, look out, my friend; for be certain you have sown the seed, and will, by your own negligence, reap the fruit of it.

Let us, then, trace a cold, and see how it can possibly lead to such serious results; for there are but few of us who have not suffered, either on ourselves, or by friends having been taken away from us to a premature grave from the effects of "only a cold."

A cold may be summed up as a sudden and continued stoppage of the circulation of the blood in the skin, whereby the function of perspiration is arrested. Now, I can't put it plainer, but, in so placing it, the matter seems simple enough, and yet how dreadful are the effects of that stoppage of perspiration!

You naturally then ask, of what importance is this said perspiration? Well, let us see, as briefly as possible. Perspiration consists, chemically, chiefly of water, holding in solution various salts, and amongst others, principally lactic acid; besides which, it contains a large quantity of effete matters on the worn-out and used-up tissues of the body. I have frequently in lectures described to you the fact that, every hour, every minute, nay, every second, our bodies are changing, that is, wearing out and getting renewed. If a house wears away, and the bricks and mortar fall down in a passage, that passage or alley will ultimately be blocked up, and there will be no thoroughfare, unless, indeed, the rubbish is removed. Now, exactly the same thing takes place in our bodies every second of our lives, for we are continually wasting away, and the worn-out particles must be taken away, or our vessels become blocked up; the circulatory fluids can no longer pass; disease and death then soon set in. One of the chief scavengers to remove this is perspiration. Check

that; stop the skin from performing its office, and the greatest cleanser of the body is put *hors de combat*. Now, is it not simple, like Columbus and the egg—when you know it?

We now know what perspiration is. What is the skin? “Oh,” says the reader, “every one knows the skin’s—the skin.” Yes, but are you aware that you have over every inch of that, in many instances, pachydermatous covering, no less than about 2800 open mouths; that it serves as a covering to the body, as a lung or breathing apparatus; that it acts as an absorbent; and that by these 2800 open mouths to the inch, or 7,000,000 over the whole surface of the body, it gets rid of SEVEN GRAINS of perspirable matter every SECOND of your lives?

Well now, if these seven grains are not got rid of every second, derangement ensues; and if there is not quick relief, disease must set in. I certainly have only mentioned one means, namely, by the blocking-up of the passages—in other words, by obstructing the general circulation; but there is another and most important question which I desire my reader to understand, and that is, that in the wear and tear of life there are certain highly nutritious, or, as they are termed scientifically, highly nitrogenous matters, to be got rid of from the body, and these are scavenged by the kidneys. Now, you are all aware,

especially young lad readers, that, when going to plunge into a bath, standing for a few seconds "funking" before going in, and then getting the surface cold, you feel that you must urinate. This is because the skin, getting cold, had its function temporarily suspended, and the kidneys had taken up the work, in order that the seven grains per second should still be got rid of. In plain words, the kidneys sympathised with the skin; but remember, that one member may temporarily do a little extra work without any injury, though if this continues, the organ, having more to do than it is capable of, becomes deranged in its action, and ultimately this derangement leads to disease. The same with either of you: you may work every day; but set yourself to do double work, night as well as day, you will soon be knocked-up or deranged in your system, and ultimately disease and death will ensue. Now, if the kidneys become deranged or diseased through want of action of the skin, the too-highly nutritious or nitrogenous matter will not pass out of the system by its means, but it will enter into the general circulation, mount to the brain, and the individual will die from a disease known as narcotism.

Thus we perceive that, when the skin ceases its function, other organs perform it—namely, the

kidneys; but that if these latter perform the office long, they become diseased. It is obvious, therefore, that from "only a cold" we may get disease of the kidneys. If you examine what passes away from the lungs and from the skin, you will find one great material, most poisonous to the body—carbonic acid.

Now, carbon is again the result of the wear and tear of the system, and the scavengers for removing this *débris* are the lungs, as well as the skin. If the skin does not act and get rid of its quota, the lungs must, in order to keep up the balance of health. The lungs then will have, like the kidneys, extra work; but the way carbon is got rid of by the lungs is by burning it. Now, in order that a thing should burn, whether in the grate, or in the lungs, we must have a supply of gas—an ingredient of the air—called oxygen; and the more oxygen is brought in contact with carbon, or the material to be burnt, the quicker this is consumed. Hence you will see, if we have a large superfluous quantity of carbon in our system, through its non-elimination by the skin, we require a larger quantity of oxygen to come to the lungs to burn it; or, reversing the affair, we require immense quantities of carbon to come frequently to the lungs to meet the oxygen contained in the inflated lungs. Now, in order to bring this extra

quantity of carbon, the heart must be set to work to pump the impurely-loaded blood to the lungs. Well, here again we get another organ implicated, which, if at all weak, and unable to carry on its work, will get out of order in its valves through the extra pressure brought to bear in scavengering the carbon out of the system. So here we see how the heart can get disarranged, and ultimately diseased, by "only a cold."

Well, the lungs in like manner, having this extra amount of work upon them, become inflamed and diseased; but this requires a little more elaboration here. You must understand that there are two skins in the body—one which lines the whole external surface, and the other which lines the whole internal surface, but which is more familiarly known to us as the mucous membrane. The line of demarcation commences at the lips, where the white and red skins meet. Now, the moment the blood deserts the skin, or external covering, it goes to the internal one. If this blood remains there for any length of time, we get congestion and inflammation. Thus, as this membrane lines the nostrils, throat, bronchial tubes, and lungs, as well also as the other parts, such as stomach, bowels, &c., those organs become implicated. If the membrane of the nostril and eyes become attacked, we get coryza, or cold in the head; if the

throat membrane, we get bronchitis; if the lung, we get what is termed pneumonia; this latter communicating itself or spreading to the external lining membrane of the lung, we get the pleura affected, known to us as pleurisy; and if the lung and pleura both be simultaneously affected, we have pleuropneumonia. I think I have given you here all the learned terms used by us medical men to denote the different diseases of the chest produced by "only a cold."

To sum up, by stoppage of perspiration we give extra work, and if it is allowed to progress, ultimately disease to the following organs, either respectively or collectively, viz.:—The kidneys, the lungs, the heart, consumption.

Now, how do we get "a cough?" Why, the lining membrane of the bronchial tubes secretes, in the ordinary healthy condition of the parts, a substance called mucus. When there is a desertion of the blood from the skin, as in the case of a cold, you get a greater determination of blood than formerly, and the consequence is, there is a greater secretion; this, by accumulating in the air passages, has the watery particles evaporated from it. The mass obstructs the air tubes; the nerves feel this, and communicate it to the muscles, which muscles forcibly contract, and the foreign body is expelled. This, then, is

what is meant by "a cough." I might here mention that many writers have conjectured that this phlegm, or dried mucus, got putrid, and this putridity caused, or rather was, consumption. I do not hold with this hypothesis. Now, this latter disease is either hereditary or it is engendered by a low system of diet, confinement in apartments, want of exercise, and breathing a vitiated atmosphere; or it can be induced by frequent attacks of coughs and colds on a weakened frame. Especially can it be brought on by the practice of wearing thin shoes in damp weather, and producing a cold; then, perhaps, before the young girl is thoroughly recovered, by going to a party or ball, and exposing herself to a cold, damp, night atmosphere after coming out from a hot vitiated air, and in profuse perspiration; the sudden shock has frequently been the cause, in cases in my own practice, to warrant me in warning all from exposing themselves to cold air after being in a thorough sweat, as in coming from a ball-room, or where there has been much exercise and many persons in the room.

Another means of getting consumption is by catching it from another; and I have undoubted cases in my practice which have undeniably proved that this disease is contagious, or infectious, or both. I remember the case of the daughter of one of our

M.L.A.'s. All the rest of the family were healthy, stout children. When I was called in, I examined the child's chest well, and pronounced it an undoubted case of phthisis (consumption). The father said it was impossible, as none of his family had ever had such a disease; neither on the father's or mother's side was there any taint. I nevertheless adhered to my opinion, and inquired the history of her life. She, it appears, had been healthy up to the time that a gentleman who was very fond of her had come to live at the house, and she, a mere child, was always with him, and was allowed to sleep in the same room, and often in the same bed with him. The father remembered that up to then she was perfectly healthy. She gradually declined, until, about one year after the gentleman's decease, death put an end to her own sufferings.

But my business is to show now how consumption is engendered by "only a cold," and then to show how this terrible disease may be stopped at its onset, as space will not admit of digressions. Continuous inflammations, then, will produce in the lung a greyish matter called tubercles, which are transparent; these are in small seed-like bodies, called millet-seed—hence the name miliary tubercle; they increase in size, soften, and turn into a dull yellowish fluid, called pus, or matter. This is expectorated in the

same manner as we saw was done in a cough. During this time the general health suffers in various ways; the cough becomes more troublesome, the respiration is increased, there is the celebrated "stitch" in the side; fevers, hot and cold; the body becomes debilitated, profuse sweating takes place, loss of appetite, emaciation sets in, and we get spitting of blood, and hectic fever, as shown by the beautiful, healthy-looking, flushed cheeks; the tubercles then increase in size, the patient expectorates pus; pieces of what he calls the lungs, and which smell, are thrown up; diarrhoea, increased debility, and death; and from "only a cold," which might have been relieved in the earlier stages. Many a life have I been conscious of having saved by a mere timely warning; and not only warning and advising, but seeing personally that my directions were followed up, and that to the letter.

Now, how are you to go to work to relieve "the cold?" Well, you know what a cold is; namely, a checked perspiration, and a want of circulation in the capillaries—that is, the small blood-vessels of the surface.

Well, the best remedy I can at once recommend—for really it recommends itself—is the Turkish bath. Remember, that, under the heading of gout, I made mention of this remedy, and for the same

reasons that I do here—the chief one being, that it restores the circulation in the capillaries, and, consequently, reproduces the perspiration. Besides which, the shampooing has the direct effect of stimulating the blood-vessels of the surface. But every one has not got a Turkish bath to go to; and under these circumstances the next best remedy must be made use of, and that is, the hot bath of 102 deg. Fahrenheit, and let the patient remain in it for twenty minutes; then take a cold shower after, and remain a few seconds exposed to the cold air; then dress, and take a sharp walk after it. If a hot bath cannot even be had, let the patient put his feet in hot water; on going to bed, take out the sheets from the bed, and turn in between the blankets, having previously placed at the foot of the bed a large stone bottle filled with hot water, and wrapped in a piece of flannel to prevent it burning the feet; and let him also take a good treacle posset, consisting of hot oatmeal gruel, well sweetened with treacle, and if about a dessert-spoonful of sweet spirits of nitre has previously been taken, all that can be done without the aid of physic will have been tried; and in most cases this plan will thoroughly succeed.

Should the above simple plan not be sufficient, let the patient take the following mixture next day, with the powder going to bed at night; and

still take his hot posset. Let him live as follows— Good STRONG beef-tea for breakfast, with a slice of toast; at eleven a.m. a raw new-laid egg, beaten up with a dessert-spoonful of whisky or brandy and some crushed sugar. Beef-tea and a chop for dinner, and toast; and for every meal, beef-tea or broth strongly made; the object being to give tone to the heart to pump the blood to the capillaries. I know this treatment will be objected to by my medical brethren, but I may inform them it is a vast improvement on the old slop-diet system usually prescribed, and which, by the way, I formerly used myself with my patients. The science of treatment makes rapid changes and progress, and he only lags behind who does not avail himself of the latest improvements in his art. You perceive that it is only one, or at most two, days that you or he will have to restrict himself; and surely this need not be so much regretted, when you know that, by so doing, you are really economising your time as well as money, and avoiding a perhaps dangerous disease. The mixture alluded to is as follows:—

Epsom salts, one ounce and a half.

Sweet spirits of nitre, half an ounce.

Nitrate of potash (saltpetre), one drachm.

Acetate of potash, one drachm.

Tartar emetic, one grain.

Camphor water to a six-ounce bottle.

Take two tablespoonfuls every four hours.

Ten grains of Dover's powder on going to bed.

Should there be any pain place a mustard plaister on the chest, and make it with hot vinegar instead of water, and keep it on for about twenty minutes ; then remove it, wash the part with warm water, and dip a piece of lint or soft linen in sweet (olive) oil, and put on the sore surface, *et voila tout*.

If this does not do good, or, in plain words, relieve the pain, the skin is still hot and dry, and there is difficulty of breathing, ACCOMPANIED with much pain, then I counsel you to send at once for the nearest medical man, and take advice. It will be cheapest in the long run, as you may be on the brink of an impending pleurisy or lung affection ; but, in the majority of cases, if you persevere with the course I have here laid down you can make your mind perfectly content that you have used common sense, and availed yourself of everything that science can do for you, although it is expressed in simple Saxon.

INDIGESTION.

“WHAT to eat, drink, and avoid,” was the title-page of a book which was written by a medical gentleman* whose assistant I formerly was. The circulation of it became so large that the title was at last a household word in the mother-country; and I remember *Punch* travestyng it, or rather answering it thus:—“What to eat? roast pheasant! What to drink? champagne and claret. And what to avoid? ham sandwiches, a penny each.”

Now I intend here chiefly to speak of that organ which, it is stated, paves the way to an Englishman's heart, namely—the stomach.

Well, what is the stomach?—a mere bag, a common receptacle for food. “Nothing more?” No. Why, then, it's all bunkum for the medical man to tell you that you have derangement of the stomach.

Of course it is, my friendly reader; there is no such thing. The stomach is, as I wrote before, a mere bag, lined with a coating called the mucous membrane, to which I referred, in “only a cold,” as lining the whole of the interior of the animal

* Dr. Culverwell, of Argyle-street, Regent-street, London.

body, commencing at the lip, where on the one side we have the skin, and on the other the mucous membrane. This coating in the food-bag or stomach is dotted all over with little mouths, which lead to very minute glands, called gastric glands, because they secrete the gastric juice. This juice is very powerful in dissolving solid food. You will clearly therefore perceive, as we advance in this subject, and as we enumerate the numerous symptoms arising from dyspepsia (indigestion and its concomitants), that the stomach has really very little to do with indigestion. In order to understand, therefore, more clearly the latter, let us take a rapid view of the physiology of digestion.

A piece of food placed in the mouth is cut by the front or incisor teeth, is torn by the eye, dog or canine, and ultimately ground down by the molar or grinder teeth. In this process are engaged certain glands, situated in the mouth, which secrete a fluid called the saliva; this becomes incorporated with the mass, which is then rolled into a ball, and by the tongue is passed into the gullet or foodpipe, and from thence it passes into the stomach; its presence there stimulates the gastric glands to action to pour out their juices, and then by the action of the muscular walls of the stomach this mass is thoroughly churned until it becomes quite pulpy; it then passes

through the lower end of the stomach into the small intestines, where it meets with other juices from the pancreas or "sweetbread," and from the liver. These two juices digest, in conjunction with the saliva, what the gastric juice does not do, namely, the starchy and fatty portion of the food. This mass passes along the whole of the small intestines, the internal lining membrane of which has small open mouths, which suck up or absorb the nutritious portions of the food; these mouths have small tubes attached, which ultimately converge into one tube, known as the thoracic duct, and which empties itself into a vein by which its contents are carried to the heart; this powerful muscular organ pumps it into the lungs, to be mixed with the air; from thence it returns to the heart, by which it is pumped through the whole of the system to supply the continual waste of tissue going on in the body. The remainder of the mass passes along by the large intestine from the body.

So far then, briefly, for the philosophy of digestion; but, what is indigestion? Well, I think I may, without a boast, state that I have had under me more cases of indigestion than most men, and yet I cannot, in one comprehensive sentence, say what it is. For, in that one word is comprised inflammation, ulceration, cancer, thickening of the

coats of the stomach, either too profuse or a want of secreting power of the liver, &c. Thus you perceive that, after all, the so-called indigestion is but a symptomatic affection, showing clearly that there is a derangement somewhere; and, according to the particular set of symptoms which appear, so will be the disease of a particular organ demonstrated to the careful and observant medical man; and, having once detected that, the remedy is in most cases easy. But if the practitioner is not attentive, and discriminates not the actual organ diseased, then he is like the mariner at sea without compass or rudder. I have seen most frightful examples of this; and I have also seen the poor unfortunate wight who has placed himself under the treatment of this kind of gentleman, so doctored, so drugged, as to be a perfect apothecaries' perambulating shop. Let us look, then, at the general symptoms, and see if we can find out the causes of them. Patient has a furred tongue; is full and distended in the abdomen after eating; suffers from constipation, though sometimes there is relaxation of the bowels; has a pain between the shoulders, at times, of a dull character; there is lowness of spirits; pain frequently after eating; and a host of other symptoms, too numerous to particularise in a popular treatise of this character. The symptom, however, which usually accompanies

nearly every case of indigestion in this colony is flatulency. Now this, in most cases, arises from the inordinate number of "nips" that are taken daily. This injurious system of introducing stimulants, causes the lining membrane of the stomach and intestines to be in an irritable or partially inflamed condition, the consequence of which is, that both absorption and secretion are arrested. If, then, the stomach does not secrete the gastric juice, the food taken in cannot become digested; and if absorption is arrested, that portion which is digested cannot become absorbed. What is the consequence? Why, that very food which lies in the alimentary canal, remains there, as any other piece of meat or food would in a bladder containing warm fluids, and kept at a high temperature—the result is putrefaction. Now when a body putrefies it gives off gases, and these, if not carried away, distend the walls of stomach and bowels, and consequently the muscular fibres attached to these become paralysed, and permanent injury is set up. But I must warn my readers that they may also be led away by this theory which I have put before them, inasmuch as the intestines themselves secrete air, when no decomposing food is present, *but I have chiefly found this in cases of continuous nobblerisers.* Again, I may mention that I have met, in the course of my prac-

tice, with persons who gulp down the air, in fact, swallow it, like crib-biting horses.

Now, in thus setting my face against nobblerising, I do not wish it to be understood that I am a total abstainer, or that I recommend total abstinence; on the contrary, I believe that in the artificial life we lead, it is necessary to stimulate ourselves. But "where," says the reader, "am I to draw my line of distinction, for I am continually worried by the teetotaller on the one hand, and the drinker on the other?" Well, the answer is, let the patient or healthy man examine himself as regards his feelings between meals—that is, during digestion; if, during this process, after having had a glass with his meals, he finds no inconvenience from it, but the contrary—namely, a pleasant enjoyable feeling, then he knows that he has done what is congenial to his constitution; if, however, he has the reverse of this, and his senses are duller, and he is inclined to be drowsy, and his muscles get relaxed, let him at once throw it off. So that, you perceive, I prefer you to be your own physician; and it is my invariable custom, when treating a dyspeptic patient, to *let him study his feelings*.

What is the treatment of indigestion? Well, the first thing for you to do, if it is a first attack, is to diminish the diet. "Oh!" say some, "I don't eat,

doctor, as much as a sparrow.” Well, now, it’s a most singularly unfortunate simile for the case: the little sickly bird aforementioned is always pecking at something; and so, *as a rule*, is it with most of our colonial dyspeptics; placing on one side the eternal nobbler, the custom has come lately, amongst persons of weak stomachs, to take “a little and often.” Now, no more pernicious course can be prosecuted than this, for the digestive organs get no rest.

The statements made to people, by doctors and others, both as to prevention and cure, are highly instructive. One has come down to us from time immemorial. “Live on a shilling a day, and earn it,” is supposed to act both ways; but the liveliest remedy suggested, that I know of, to get rid of dyspepsia, is to “give a dog a piece of meat, and then chase him till he drops it.” All most excellent maxims. You ask, can I suggest a better? Well, there are several means, according to the nature of complaint; but the golden rule is to run through a large number of articles of diet, and to eat anything that comes in your way, and when you have found one or two that do not disagree with you, stick to them. I am sick of ordering certain dyspeptics peculiar diets. As a rule, you can put down, however, that the less you put into the stomach, over

and above what the system requires, the less your digestive organs will have to work.

Again, remember that the quality of the food is most essential for your study. Many imagine that it is from taking too nutritious food that the patient gets dyspepsia, believe me, but this latter arises chiefly from badly-cooked, greasy food, which has a number of deleterious, rich, and stimulating sauces, and these all tend to make fat—not muscle. When you hear “the tocsin of the soul—the dinner bell!” and ask how much food ought a man to eat, who is a dyspeptic, in twenty-four hours, I answer, one pound of solid food is quite sufficient to sustain the human frame; but I have had patients to whom I have allowed only eleven ounces, and they have got fat on it too. Remember this maxim, that it is not what you eat, but what you DIGEST, does you good.

One thing is certainly, however, to be avoided, and strange to say, that is the very thing most dyspeptics fancy, namely, crude fibrous raw vegetables, and amongst others, cucumbers. Those who are fond of these indigestible watery masses, remember the celebrated receipt. Select a young cucumber, with a thin skin and of a bright green colour; wash it well; slice it nice and thin; keep it in salt for three hours; *wash the slices well*, add

pepper and salt at discretion; then take two table-spoonfuls of vinegar, and one of good Lucca or best salad oil; having mixed them well to perfection, lay them carefully on a dish, and—throw the lot away.

Space will not admit of my enumerating the character of the food, and that which is easiest of digestion. There are several lists published, one by a practitioner of this city, "the means of prolonging life," a second edition of which is about to be issued by the publishers of this journal. Now the next means of cure, I would recommend, is great attention to the skin. The use of the flesh-brush, the Turkish bath, and the excellent system of shampooing the muscles and the skin adopted by the attendants at these baths, and the tapping over the region of the liver to stimulate that organ, when it is dormant in action, causes the Turkish bath to be a most excellent adjunct in the treatment of dyspepsia. The ancient Romans understood this system well, and they were good feeders and epicures. A moderate amount of alcohol, in the shape of good old Hennessy's or Martell's brandy, or some good whisky, in a tumbler of cold water, with dinner, will materially assist in the digestion of the food.

And now as regards change. If a man has got indigestion from too much mental application, let him go for a short time where there is picturesque

scenery; if it arises from want of exercise, let him go where there are hills and mountains or rising ground; if it comes from too great eating, let him get into Nunawading or Dandenong ranges for a short time, or a journey to Gipps Land; I warrant he won't be surfeited with provisions in either place, and the amount of exercise he will have to take before he can obtain it, will cause the one meal to digest before the other enters the stomach. As a rule, a warm dry air, plenty of exercise, flannel next the skin, Turkish bath, or hot or cold water bathing, or both, a bottle of hot water to the feet at night, one pound weight of food per day, and that of a generous character, with a little spirit and water, or good old claret wine. Remember—

“Variety alone gives joy,

The sweetest meats the soonest cloy.”

Change of air and scenery will cure most chronic dyspeptic affections, provided there be no organic disease. Of course, with this, there should be tonic and laxative medicines judiciously combined. When in more complicated cases the stomach will hardly retain food at all, the best nutritious, easily digested diet is raw meat beaten up and pounded, then the pulpy mass passed through a sieve and mixed with sugar, and eaten as you would a sweetmeat.

I have purposely omitted mention of any physic

here. I have treated the subject generally, because I shall, at some future time, enter into the diseases to which the various organs entering in digestion are implicated. Just now I terminate my article by wishing you "good digestion wait on appetite, and health on all."

ON COOKING.

“SOME love the merry, merry sunshine;” “some love to roam,” &c.; but I love a good dinner; and by a good dinner, I mean *a well-cooked one*. I observe that the *Australian Journal* provides a monthly supply of recipes from Mr. Chambers, the renowned cook of the Melbourne club; and those said recipes embrace both useful and elegant preparations. It is not my intention, therefore, to interfere with the details, but I think, as I have given elsewhere a word or two on Indigestion, it may not be amiss for me to glance at the various means of cooking, and their effects on the food, and consequently impliedly on the consumer; for I think that the province of the cook is to make food agreeable to the taste, and present it in the most digestible form. I think the most cynical, ill-tempered, and cross-grained “cuss” can always be got into an urbane condition by a good dinner; therefore, even if you, gentle readers—I allude, of course, to the ladies—have “a brute of a husband,” pray study cookery. Present a well-cooked dinner to him when he comes home from the arduous duties he has had to perform, and the cross and

wearied look will gradually be dispelled from his face, and in lieu of it, a complacent, smiling countenance will reward you for your pains. I think it was Napoleon, who, whenever he wanted to do a little diplomatic business with plenipotentiaries, caused Cambacères, who kept the best cook in France, to previously invite them to dinner.

It is unreasonable to imagine that a man who FEELS he has a stomach—that is, who suffers from distension caused by undigested food remaining there, and who, by that very distension, has pressure upwards to the chest, preventing him breathing freely, or, from the same cause, has palpitation of the heart, in consequence of limited space for that organ to work in, can be otherwise than irritable, and his nervous system disturbed; unfitting him to enter into any matter of detail; causing him to feel that he is at war with the world, and the latter with him; making him snappish, ill-tempered, unwilling and unable to fulfil his duties with pleasure to himself, or satisfaction to those surrounding him. Mark the contrast, however, with the man who arises from a well-cooked and served dinner. He is pleased, benevolently inclined, feels happy with every one surrounding him; and if you really want a favour, now is the time to ask it, and get it performed.

Happy is the man who can put his hand upon his stomach and say, "I HAVE DINED." Ah! millions say daily, "I have had my dinner;" but I repeat, happy the man that can say, and lay due stress on the words, "I have dined." Do not think, reader, that I am needlessly occupying your time, for in truth you will find that not for epicurism am I thus laying stress on the above; for remember, the object of food is to give strength to the body—to renew and rebuild the worn-out tissues, and to supply the material for keeping up the animal heat of the system; how necessary is it then that we should attend to the quality of the food, and the quantity of it; but still more, that we should present it in such a shape as to make it delightful to our senses and to be easily digested. This, then, is the prime duty of the cook; and, next to the medical man in importance on this terrestrial globe, give me the cook. Sweet, unctuous, soothing, consoling-sounding word—the cook. Roll that word round and round the mouth, and somehow, it's one you can't help repeating—cook! cook!!

Now, don't think I am an epicure or a glutton, for you will be mistaken. I am a moderate eater—and am very thin. Many a one, looking at me, has said, "Would he were fatter!" Neither need you blame me for loving a good dinner, especially since I have given you the reasons above, why you should all take

care to live well. I remember reading—I think it was of the philosopher Descartes, who, being discovered once by a fop enjoying himself in eating a nice dinner, was asked by the fop, “What, do you philosophers eat dainties?” To this the philosopher answered, “Do you think that God made good things only for fools?”

First, I shall direct my attention to the meat of this colony. I am very much afraid that we consume a large quantity of diseased meat; which, although not marked at the time in its effects, ultimately produces most serious consequences to our frames. I remember, years ago, speaking of the action of pleuro-pneumonic beef on the system, and it was attempted to show that my ideas were wrong; but the public, I noticed, remained on the safe side, and desisted from eating beef till the epidemic was over. Again, I have had patients suffering from “flukey,” communicated by having eaten sheep in a flukey state; and I have had on a few occasions to tap patients for the same. I have never yet had a case of trichina in this colony, but I have no doubt, from the manner that they feed the pigs here, with the refuse of the slaughter-yards, that this disease is in existence, or will shortly be so, for every facility is offered to incite and propagate this terrible disease. But, chief of all, would I call the attention of the

public to the hurried manner in which sheep and cattle are driven down from the interior to our Flemington slaughter-yards, and there killed, whilst in a nearly exhausted condition. Now, it may not be known, and I certainly have never heard it commented on by our medical men, although I have frequently brought it before the public, that an animal, exhausted either by disease, by long journeys, or by agony—as extreme pain, &c.—is much less nutritious and easy of digestion than an animal that has had a sudden death, and has rested before being killed. I have no time here for giving lengthy opinions, much less for entering into physiological reasonings. Let the housewife, then, in selecting her meat, take due and sufficient care that the food she selects be of a healthy natural colour, &c. In fact, this is a matter of so much importance that more State supervision should be exercised in this respect than has hitherto been done. An officer should be appointed to inspect the various butchers' shops; and certainly, for the sake of the poor, a thorough inspection should take place every Saturday night in that unsavoury square called "Paddy's Market."

In Paris the greatest care and circumspection is used in this, and we cannot ourselves be too particular. You may hear ignorant men—nay, even some of my medical brethren have disputed what I

stated in my lectures years ago concerning pleuro-pneumonic meat. They have declared that it is not injurious to the system. I never yet heard an argument to this effect that was at all logical, but I ask my readers to simply glance at the function of digestion and assimilation, and they will quickly perceive that at least I have a reason for saying what I do. In my former article on Indigestion I described how food was assimilated, but as this may have passed from your memory, I will merely say, that food being acted on by the gastric juices, the internal skin, or mucous lining of the digestive apparatus, absorbs it in a liquid state, simply imparting to it those peculiarities which fit it to enter into the blood, and thus become a part and parcel of ourselves. Now, in order to do this, there must be a similarity in the matter taken into our bodies with that of our frame. It is obvious that if the material with which we build up our system, or in other words assimilate, is diseased, it naturally follows that the frame composed of such material must be also impregnated with this disease.

The next important item, as regards the cookery question, is that of the flour used. In this colony the best, most nutritious, and economic for the housewife, is the Adelaide silk-dressed flour. The best criterion to judge by in flour is that it

retains its shape when you squeeze it in the hand; that it is white, having a straw-coloured tinge, and no specks; that when wet, it is elastic, and not sticky. And a most excellent test, when purchasing it at a store, is to squeeze a little in the hand like a ball, and throw it against a smooth surface. If it adheres to the latter, it is good; if it falls like a lot of powder, it's bad. As regards the vegetables and fruit, believe me, the better class are always the cheaper in the long run. As regards the utensils for cooking, the plainer and cleaner the better. If copper ones are used, the greatest circumspection must be exercised that there is no oxidation, or "rust," as a whole family may be easily poisoned by the neglect of this precaution.

Having now paved the way for my next article, which will be upon the various modes of cooking, and their effects upon digestion and the nutrient qualities of the food so used, I conclude this first part by stating, that I think it nothing derogatory for a medical man to have a knowledge, nay, a thorough knowledge of cookery; for it often happens that a patient, on recovering from a severe stroke of illness, has a most delicate stomach, or requires something to give a zest to his palate, and thus introduce into his system quickly the means of nutrition, and consequent speedy strength.

Frequently also a patient requires food in order to carry him through his sickness. I have often been asked, "Doctor, what shall I take to eat?" and when I have ordered it, they tell me on the next visit that they could not take it; "It turns upon my stomach, doctor," &c., &c. On my tasting it, I have found that it was insipid, and worse than the physic I have been administering; or else it has been made deficient of the more nutritious elements, and many a time have I found that a gentle hint to the housewife has been taken in good part, and the patient supplied with a food at once grateful to the stomach and palate.

Perhaps it will be necessary here to say a few words as regards the diet before entering upon the manner of cooking it, and in doing this I will be brief. Let it be understood, then, that the quantity of food a grown man must consume should be in proportion to the waste which is taking place in his body; and this food should contain all the elements of his body. Now, the food a growing person should consume must contain all the elements of his body, and as much waste as is continually taking place in his system; but, in addition, there must be a surplus to make up for the growth which is going on. And these elements, moreover, must be proportionate with those contained in the body. Remember, also, the maxim

I have formerly laid down, that it is not so much what you put into the stomach, but *what you digest*, does you good: but if your digestion be perfect, and the food you present to the digestive organs for assimilation contains all the elements required for building up the system and supplying the waste of tissue, and that food be given in a condition in which it is not altered or rendered indigestible by the cooking, then you get the acme of perfection, and all things equal, or, to use a sporting phrase, “bar accidents,” you must live to a green old age. As a rule, flesh and seeds contain the nourishing materials, whilst leaves, stems, and roots contain the mineral materials. Here I may however remark, that these latter must be well masticated, or they cannot be assimilated. There is one class of food which contains nearly every element of the human body—this is the potato. I do not think I could give a better illustration of the effect of cooking upon food than in this one class, representing as it does chiefly the starchy, or heat, or fat producing element. Now all starchy bodies have a covering, which renders the inside indigestible in consequence of that covering being insoluble in water. When, however, heat is applied, this covering bursts, and the inside is then subject to the action of that heat, and is rendered capable of becoming digested. Suppose, then, that

you fry or bake, or cover the surface with fat, by what is called browning it, you have a burnt, hard, indigestible mass outside, and an uncooked one inside; if, however, you have a means by which this mass is thoroughly exposed to heat, in such a way that the whole is permeated with heat, then the article can be properly said to be cooked, and this process is that of boiling slowly; by so acting the covering is broken, and the rest of the starchy matter is exposed to a gradual heat, and to the water in which it is soluble and consequently cooked; roasting and steaming answer the same purpose. But slow boiling is not so good in regard to meats, for then a large quantity of the nutritious elements is dissipated in the water, and a mass of hard indigestible fibres remain, and these, unless well masticated with the grinders and triturated, pass through the system in their natural condition, and therefore, irrespective of the injury they occasion to the digestive organs, they are totally lost in an economical point of view. Of course, if the object is to make soup, then slow simmering is the best; never allowing it to come to a boiling point, because you thereby dissolve the albuminous or nutritious parts of the food without coagulating it.

This particularising may look very frivolous to the unthinking, but as I may want an apology for being so minute in the matter of eating, I may be allowed

here to introduce an anecdote of the Duke of Wellington, who, dining with the celebrated *gourmet* Cambacères, and being asked how he liked a certain dish, answered, "It is excellent, but to tell you the truth I don't care what I eat." "Mon Dieu," exclaimed Cambacères, "don't care what you eat! Why then did you come here?" Although not willing to carry this to such an extreme, there can be no doubt but that the effect of improperly-cooked food, which is synonymous with innutritious diet, is to lessen equally the physical, moral, and intellectual condition of the body.

Of all methods of cooking, commend me to that of roasting, for by this means the outside is coagulated, and the juices being confined inside an impermeable envelope, which however allows the empyreumatic oils to pass away, the fibres become gelatinised to a considerable extent, and thus are easily acted on by the gastric juice; the fatty matters are acted on by the alkali of the blood, which therefore takes on itself the office of the bile, and partly digests it; and the whole is rendered easily soluble by the gastric juice, and besides, in an economical point of view, no loss takes place.

Now, what I wish to point out is the difference between roasting and baking. In the former we have seen that, by the piece of meat being exposed to

the fire, it certainly has a hardened crust outside, but still is surrounded by fresh currents of air in the cooking, which allow of the exit of certain oils and gases, such as empyreumatic oils and acid matters, all of which are not only useless but injurious, and give rise to those sensations of rising of hot fatty tastes in the mouth after eating which dyspeptics so much complain of. Now in baking, these gases and oils, not having means of escape, are kept in the meat. The same observation applies to pies; hence the necessity, when cooking these latter, to pay great attention to leaving a funnel or chimney in the crust to allow of the escape of these empyreumatic oils, &c. Where this has been omitted, I have known persons exhibiting every symptom of poisoning, and have traced it to this source. I allude of course to dyspeptics. Speaking of pies makes me think I may here mention a word or two on crusts. These are of two kinds. In the one we can, by constant beating, so well mix the fat or butter with the flour as to minutely divide the grains of starch. This is known as short crust; but in the other, known as puff paste, you get a solid mass, which, not being so minutely divided, lies like a solid mass on the dyspeptic's stomach, and by its fatty exterior prevents the gastric juice from acting on it, and the granules of starch not being so divided

offer a resistance to the digestive apparatus of a most rebellious character. Baking, however, as conducted in what is known as a Dutch oven, is not open to the same objection, as being surrounded by air it resembles more the operation of roasting.

Next to roasting, and in fact similar in its action to it, is broiling. My observations, therefore, on the former may be taken as referring to the latter ; but in broiling, care must be taken that it be done over a clear fire, and that quickly too, just sufficient time being given to harden the external covering, and then turn to the other side. To all dyspeptics I say, before eating cut the hard brown exterior off. If, then, I recommend this latter because of its indigestibility, what must I say of the wretch who can eat, and cause others to eat, fried meats, where all is hardened both inside and out. Hardness, remember, is the enemy to digestion ; softness, its friend. Allow me a practical illustration. A lightly boiled egg is easily digested, but when boiled for half-an-hour an ostrich alone can in a reasonable time digest the same. All flesh, then, is albuminous, and remember when cooking it that you are merely cooking an egg ; and when cooking your meat, like Izaak Walton* with the worm, use it tenderly as if you loved it.

I find, however, that I am encroaching too much on my space, and yet I have hardly commenced my

subject. I shall, however, devote another chapter to this question. I shall also write a few words to the labouring classes of this colony, and make it especially adapted to these columns, in the matter of model dining-rooms. I cannot see why we, with such abundance of meat and vegetables, should not have our model eating-houses for the working-classes equally with England and her model lodging-houses. If, as the *Times* said, "the art of feeding is a science which affects the well-being of twenty millions of the citizens of England," surely in a young country like this, which has shown so go-ahead a spirit, and where nature is so bounteous, it is only a compliment to that bounty to make the best and most economical use of the same.

It comes to be a matter of nice calculation, as I have somewhere seen, viz., that a woman must eat a half-quartern loaf a day, and a man a similar amount and a slice over, in order to have sufficient to sustain life. These exact scientific deductions, however, don't "come off" in the matter of diet, for we often find the animal falls a victim to these experiments, as view the horse which died just as he was about to live on the one straw a-day. Now various schemes have been set afloat by highly-scientific men; they have calculated how much waste of tissue has taken place in the twenty-four hours, and how many grains,

therefore, of material would be required to be eaten to make up that amount of loss. And then they have gone into the finest analysis as to the chemical composition of the different qualities of food; but somehow or another they have never yet been able to hit on the exact quantity—the “pot has literally boiled over” in so many cases, that physiologists have been compelled to generalise or give the matter up in despair. Doubtless it would be a happy thing if a man with a large family knew how to calculate to a grain how much was required for the animal economy of his children and wife and self, so that there should be enough and no more, and therefore no waste, especially if that man were in the Civil Service, and was unable, through our political squabbles amongst members, to get his salary at the time when it is rightfully due to him. But though this may, and might, be a great desideratum, yet a greater consideration is the means of making what he has got go a great deal farther, and that can be done by a knowledge of cookery, as well also as by a knowledge of the nourishing and non-nourishing foods—in plain words, of that particular kind of diet which, weight for weight, will produce the larger quantity of building-up and heat-producing matter. Luckily for us in this colony, our working-class population is not put to such shifts as are the poorer classes of

England, where, for instance, a man may earn nine shillings a-week as a farm labourer, and keep himself; and in these cases, by use of hot food frequently judiciously cooked, as, for instance, the mixture of hot grease and cabbage, he sustains life and works hard; or, as in Scotland, when there is the chance of a lamb which may die of some natural disease or epidemic, as the staggers, he obtains a nutritious food when cooked with oatmeal; or as in Ireland, where he may obtain his ten pounds of potatoes boiled in buttermilk. No; here, thanks to our climate and the price of labour, a man in health can always get a sufficiency of nutritious diet; but really I doubt whether he gets the same amount of nutriment from his abundance as the above do from their poorer but better-cooked food. Now let me give one simple, yet most important illustration of the action of food on the animal economy, especially in regard to the labouring classes.

The scurvy is due to the exclusion of vegetable diet. Now this occurs, or rather did occur to a terrific extent formerly, on the land equally as it does now at sea during a long voyage. The feeding, for instance, in this country, on salt meat and damper, will and does produce this disease to a much greater extent than many of our medical men will give it credit for; and they are frequently puzzled in treat-

ing a disease which could be eradicated by the simple process of changing the diet from that to a vegetable one. For want of attention to this simple question, thousands of our troops were slain by scurvy at the Crimea; and yet by giving the men a few onions and a little limejuice, the whole of this terrible scourge was, as by a miracle, thoroughly eradicated.

It is necessary to bear in mind that, in order to properly nourish the body, there must, in food, be a judicious blending of the varieties of it. One single article alone, as I have before mentioned, is unable to sustain life. I might here remark that even poisons in judicious quantities can act as food, so diverse is it. Why, there are little animals of the squirrel tribe, who actually eat and live on the hard ivory tusk of the elephant. Food, to sustain life, must consist of two things—flesh and fat; but let this former be understood to contain also albumen, and the latter starch or sugary matter. Well, now, having got thus far, remember that in order to assimilate easily this food, it must be so prepared as to give the stomach the least work. Now, in my article on *digestion* I went fully into this latter, and therefore shall confine myself to pointing out here the immense trouble we go to, in our lodging and eating-houses, to prevent the stomach from, to say the least, having an easy task to digest or assimilate the food.

A medical gentleman, Dr. Campbell, has pointed out to the public the terrible, indigestible mass presented to our sick at the hospital. Now refer back to what you have had presented to you in the majority of our eating and dining rooms, and ask, is there much difference in the description? Are you not fully aware, when you enter this town's dining-rooms, that you will be confined to a chop or steak, or a piece of meat so badly boiled or roasted that either it is too much cooked, and thus deprived of its nutriment, or it is underdone, and disgusting to a sensitive palate; besides, the exorbitant price usually asked is highly ridiculous. In this colony, with meat and vegetables at so low a price, we ought to dine at least as cheap as in England; but, on the contrary, I know of no really respectable eating-house where you can depend upon having everything properly cooked, nicely and cleanly served up without noise and confusion, and the dinner presented to you in a cheap and appetising form. Certainly our old friend Barton says he does, but as he has not published his prices, and never sent me a *carte blanche* ticket to visit his establishment, I can't pronounce upon its excellence; however, I make him a present of this advertisement.

Now the above remarks lead me to a suggestion by which any enterprising individual may make a fortune if he likes to speculate, and as it will be of

great utility to the public and a benefit to the readers. I here give it.

Let any man take as nearly central premises as possible, and fit them up with all the comfort he possibly can, consonant with a due regard to economy; let his kitchen be extensive, having all the latest improved culinary utensils for cooking; let him engage one first-class head cook, and a good staff of civil and obliging waiters, or, what is better still, "a bevy of beautiful ladies," as Tom Nunn used to advertise his lady riders of the *cirque*; let them be cleanly in dress, with orthodox white apron and napkin; let each visitor, no matter what his position may be, or how he may be attired, have equal civility bestowed on him; let there be no bustle; let the dishes be composed of only a few in number; have the prices well established, the meat well and judiciously cooked, the vegetables properly boiled, the plates warm, and the linen clean; and lastly, let the master of the establishment personally superintend the whole of the business of the serving up; and depend upon it, if the dinner come to sixpence each meal, with no gratuity to the waiter, a large fortune can be amassed, and all the speculator would have to do would be to drive down in his carriage—as many a London proprietor does—and remain on his business premises from twelve till two.

This is no Utopian scheme; a large fortune is to

be amassed at it. I remember Mr. Dyche, or Dight, living near where Garton's Hotel now stands, who started shilling dinners. Every one laughed at the idea; but he carried it out, and in two years made an independence. Now this was when everything was of a most expensive character; but now that vegetables and meat can be got for so small a price, what could not be done by a man who would go in for an uniform fixed price, of few joints and non-regard to personages. It may be said, "Oh, you won't get respectable people;" but those who talk so do not understand that in London at any time can be seen the wealthiest of London's merchants sitting down by the side of the poorest of clerks, but yet withal the same amount of civility, and the cuts from the same joints adorn the plate of the one as that of the other. Yes, and it is recorded that when the proprietor of the Fleece had to remove his establishment to make room for city improvements, there were old gentlemen who probably had dined there during the whole of their lives, who used to come and look at the ruins day by day as the buildings were being demolished. But I would ask you that, inasmuch as we have model lodging-houses which are really paying at home, and co-operative shops, why could not our trade societies employ their time by establishing one or two co-operative dining-rooms?

Believe me, there could be no better means of assisting in ameliorating the condition of the working-classes. It would be beneficial to the saving man, and a means of reformation to the drunkard. Ye Rechabite Societies, if you really wish to do good, go in for cheap, wholesome, and comfortable dining-rooms. The ill-fed—that is, the consumer of badly-cooked food—finds his glass more comforting to him, and he consumes alcohol in preference to solid food. Ye who wish therefore for social reform in the matter of drink, assist in carrying out my hint. Reverse the above; make, by good cooking, your food more attractive than alcohol; and depend upon it the majority of men will prefer the solid to the liquid. Shakespere says, “ ’Tis in ourselves that we are thus and thus;” but I say, ’tis in our cooking that we are drunkards or sober men. I find I must still devote another chapter.

Since writing these articles on cookery, and giving my opinion respecting the various dining-rooms, I find that the subject has been taken up by various writers throughout the press, but more particularly by one in the *Daily Telegraph*, which paper has sent a special reporter to all the eating-houses in the city; but I find that they have not yet grasped my idea, as propounded in your last, of the establishment by the working-classes of Melbourne and

throughout the large cities of the colony of co-operative dining-rooms. I have, however, by this mail seen that there is established in England a penny dining-room. Mine would be followed in a like idea, but more on co-operative principles, and after the principle of the model lodging-houses, where every comfort is combined with economy; and by purchasing wholesale, and by doing all *en gros*, and cooking only a few joints or dishes, a substantial, clean, and comfortable meal could be had for sixpence—aye, even in this colony, where things are so cheap, for threepence or fourpence; and, what is more, the same could be served up with that best of all sauce, civility; yes, and further, it need not be confined alone to the working-classes. The working-classes of this colony, who have had the skill and mutual regard for interests to obtain the eight hours' labour, and vote by ballot, and build trades' halls, can surely co-operate, and find men of sufficient administrative ability to establish and set afloat three or four of these dining-halls at such places where the operatives most congregate. I may be pardoned for dwelling thus long on this subject, as it may be viewed as a class one; but one moment's reflection will show that it is for the general weal that these large establishments should be formed, were it only to cause public attention to be drawn

to what they eat, and thus prevent frauds being continually perpetrated upon them.

For instance, the adulteration of bread. We have seen that several bakers have been proved to have used alum. Now is it to be wondered at that many of us have suffered from constipation, and that I in my practice am continually consulted in cases of habitual costiveness? Alum is a very great astringent, and would tend more than any other remedy that I know of, tannin excepted, to produce the above. I only give this as a familiar exemplification of the utility of these large establishments, for naturally with them would arise the question in the public mind of purity and cheapness, and a greater supervision would take place, and our markets would have proper inspectors, who themselves would be looked after, and thus a general good would be effected.*

I wish to now draw this article to a termination, for I know that there are many of my readers who do not care much what they eat, whilst, however, on the contrary, there are numbers who will be desirous that I should say something of the different articles of food and their digestible qualities. To the former class I shall use a quotation from a

* Since writing this, public attention has been drawn in the police courts to this evil, and several bakers fined.

wise man, Dr. Johnson, who said—"Some people have a foolish way of not minding, or pretending not to mind, what they eat. For my part, I mind my stomach very studiously and carefully; and I look upon it that he that does not mind his stomach will hardly mind anything else."

To the latter, or dyspeptic class, I will say that cookery is the main stay for them, and that attention to this will save them hours of agony and any amount of money in doctors' bills; and let me here also state, that it is surprising to me that people say, "Why don't the men propose?" "What shall we do with our girls?" was once asked. "Marry them to our boys," said the great J. O'S. Yes, that is all right, but the boys won't marry the girls; and for this obvious reason—they know that the very essential part of married life is comfort, and to have a companion who can administer to your wants when sick. Now, I ask, are the girls educated for this latter or for ornament? Well, I think they have been lashing out rather strongly at "the girl of the period," and I therefore will refrain from saying anything harsh or ungallant, such as to heads of families bringing up their daughters not to be even ornamental, but I certainly must state that they are not useful. Are there half-a-dozen families at this present time with daughters in Melbourne where the art

of cookery is taught to the rising female generation as an art? Is there any young lady now in all Melbourne in any fair position in society who could really go down into the kitchen, if the cook had got hold of the brandy-bottle and poured its contents down her own throat instead of into the sauce, or had suddenly left—I ask, is there any young lady who can or could go down, and cook and cause to be served up a decent dinner to a few invited friends? Nay, I will go further—how many are there who even know how to cook a basin of nice broth, or even make a basin of gruel for her sick parent on an emergency; and yet forsooth it is expected that a man is to unite himself to one who not only does not know how to administer to his comfort, and assist in keeping him in health, but cannot even help in his restoration by tempting him through her cooking powers to take nourishment and render him speedily convalescent. No, believe me, the way to get the men to marry the girls is to bring those girls up and educate them to become wives. Why should there not be, in these very co-operative dining-rooms, a school formed for their education in the art of cookery and serving up dinners and meals generally? By this means a useful lot of girls would spring up, and a great want be supplied in this colony; the wages would be higher,

the employment more healthy, and the hours of labour less, than while working in the cramped position for hours at a sewing machine at a mere doled-out wage.

I came upon an old scrap yesterday that I think may appropriately be quoted here:—"To speak then of the knowledges which belong to our English housewife, I hold the most principal to be a perfect skill in cookery. Shee that is utterly ignorant therein may not, by the laws of strict justice, challenge the freedom of marriage, because indeed shee can perform but half her vowe ; shee may love and obey, but shee cannot cherrish and keepe her husband."—*The English Housewife*, 1637.

How different it is with a French girl. She goes through a regular kitchen education ; the little brass and copper pans become her hands as the latter do the former ; aye, and her dinner being cooked, she can leave all directions to the *bonne*, and be seated, nicely dressed, by the side of her husband and guest or two, as cool, and collected, and pleasing as if she had never known there was such a thing as a kitchen ; and further, this pleasing little lady, if her husband is a *commis* or clerk in the civil service, and the income is small, can make half-a-dozen dishes out of next to nothing.

I must hasten on, and state that the articles easiest

of digestion are in the order as under :—Rice, boiled ; tripe, soured ; trout (we shall have them here shortly from Tasmania) ; barley soup ; venison, broiled ; brains of all animals, boiled ; sago ; tapioca ; milk, boiled ; turkey, wild and tame ; goose, roasted ; fresh lamb, broiled ; chicken ; potatoes, roasted ; custards ; boiled beef ; fresh oysters ; roast beef ; mutton, broiled ; chicken soup ; roast mutton ; flounders (Tasmanian), fried ; sausages, broiled ; bread ; boiled potatoes ; boiled fowls ; roast duck. Then come these terrible things to the human stomach—boiled salt pork, boiled cabbage, fried veal, and roast fat pork. There, now, is a host of things to choose from, and they take to digest, from the rice one hour to the roast pork five and a half to six hours.

It must, however, be understood that these are but relative times,* for accordingly as the food is masticated so will it be the more easily digested. In taking your food, also, remember not to dilute it too much with cold water ; the effect of this latter on the stomach is to render it quite pale, and of course this is due to the deprivation of the coats of the stomach of its blood. Now as the presence of

* For the table of the various articles of diet, and the time taken for digesting, see my work on *Means of Prolonging Life*. Price 1s. 6d.

this latter is essential to the due secretion of the gastric juice, without which the food, as I have elsewhere shown, cannot be digested, it will be seen how necessary it is to guard against this, or the practice of swallowing lumps of ice.

I now, in deference to my readers, close this article. It is a subject one could write on *ad infinitum*. Of course I have omitted to mention anything relative to the practical portion of cookery, as Mr. Gregory, of the Parliament House, has given such excellent articles on the practical cookery in the *Australian Journal*. I can only say that I believe we do not appreciate our cooks sufficiently. Not that I would have you suppose I am desirous of a race springing up like the cook to the Lord Lieutenant of Ireland, who refused his Lordship's salary of £400 per year in Ireland because there was no Opera Company there. But I would wish to see them better appreciated; and the way for them to be so, is to give the impetus to it themselves. Why do they not form a club or society? This would be beneficial to them, and an inestimable blessing to the public, for they could then elect their own president, and cause candidates to undergo an examination before they granted a diploma. The public here would be highly benefited, for instead of

being deceived by some ignorant booby who sets himself or herself up for a cook, knowing nothing about the matter, and spoiling a lot of provisions, besides upsetting the household and digestions of the family, they would have a guarantee of the proficiency at least of the candidate; and the cooks themselves would be benefited, because the fees they would pay might go towards establishing the nucleus of a fund for them to retire on in their old age, it being proverbial that as a body they are improvident.

“A new friend,” said Lord Gulloseton as we descended into the dining-room, “is like a new dish. One must have him all to one’s self thoroughly to enjoy and rightly to understand him.”

“A noble precept,” said I with enthusiasm. “Of all vices indiscriminate hospitality is the most pernicious. It allows us neither conversation nor dinner, and the mythological fable of Tantalus gives us starvation in the midst of plenty.”

“You are right,” said Gulloseton solemnly. “I never ask above six persons to dinner. I never dine out; for a bad dinner, Mr. Pelham, a bad dinner is a most serious—I may add the most serious—calamity.”

“Yes,” I replied, “for it carries with it no consolation. A buried friend may be replaced, a lost mistress renewed, a slandered character recovered,

even a broken constitution restored; but a dinner once lost is irremediable—that day is for ever departed. . An appetite once thrown away can never, till the cruel prolixity of the gastric agent is over, be regained. ‘*Il y a tant de maitresses* (says the admirable Corneille). *Il n’y a qu’un diner.*’ ”—*Pelham.*

OUR PEDESTRIANS;

OR, A WORD OR TWO ON CONDITION.*

I WAS very pleased to see so large a concourse of persons at the cricket ground to witness the second appearance of the English pedestrians. It is certainly a credit to us, a young colony, having a hot climate, which should rather produce a feeling of lassitude than one of activity and energy. I repeat, it is a credit to us, under these circumstances, that our citizens can, under a broiling sun, at a hundred and ever so many in the shade, turn out and witness, in thousands, these trials of strength, and more especially take part and compete in them with the zest they did. Look for instance at the plucky struggle of Lyall against a man (who could, if he liked, beat him and give him once round the course) of Topley's speed. Look at little Woodhouse also, how gamely he struggled on to the last in a beaten cause, the most difficult to race under. See with what indomitable perseverance every now and then

* This was written on the occasion of the visit of the English Pedestrians, imported by G. Coppin, Esq.

he would "come again," and give a spurt even after the three miles had been accomplished. He was third, and KNEW HE WAS BEATEN, yet his little frame bent to it, and he persevered to the last; his game-ness nothing could excel. And now also a word for Topley. His superior fleetness and slouching style of going can always make him beat his opponents at scratch with a short distance given; but why I draw attention to him is, that his work was more difficult than Lyall's or Woodhouse's, because he was not in the condition they were in; and this brings me to the subject of my article, namely, Exercise and Condition.

Every man throughout his life should be in at least a half state of condition, and the reason is obvious. At any time he may be called on, in an emergency, to perform a feat requiring strength and wind; say, if it is only in the ordinary course of business, finding himself late, he runs to catch the train. Several have dropped dead near the railway station; the surgeon who performs the *post mortem* (or rather is supposed to do it for the coroner) pronounces it, after a very hasty examination, to be a disease of the heart, and the verdict is so given. But a stricter examination into the history of the case would show that the man was not in condition; that is, his body was not accustomed to the extra call

made upon it, and from this increased circulation telling on the unprepared heart and blood-vessels; death was the result. Now, as I have brought this familiar example to your very doors as one of frequent occurrence, you can well fill up the list with numberless other cases of a similar character where death has been caused by increased and perhaps sudden exertion, used on a body not prepared for the same.

Well, what is condition? Why, nothing more nor less than the harmonious working of every organ of the frame, the development to its greatest extent of the various muscles required for the use of that body, the very highest condition of health attainable; and the frame so built up, by following proper and legitimate laws (which latter ought to be known to every man, woman, and child in this colony), as to give the greatest freedom and mobility to the limbs, and the highest nervous powers, and preparing the body to obey the will in an emergency. What are these laws then? Are they difficult of obeying? Not at all. They may be summarised as three: judicious exercise, fresh air and proper diet. So that, you see, is nothing very extraordinary, and so admirably is the animal frame constituted that there is not the slightest difficulty in any man attaining condition, much less that, which I wish you would all

have, namely, half-condition. A little patience, a good deal of perseverance and a little self-denial, will do the *lot*. It will put health on your frames and money in your pockets, and will fit you with a vivid brain to command, and a capable body to execute your business.

How am I to attain this desideratum? doubtless you say. Well, easy enough. Firstly: take a dose of purgative medicine, such as half an ounce of salts and two drachms of magnesia, with a little oil of peppermint or tincture of ginger, to prevent griping. Then live for a day or two on a diet something like the following:—

Breakfast, a little basin of gruel and piece of dry toast or stale bread.

Dinner, a chop or steak, broiled, and no vegetables.

For tea, a cup of that beverage which cheers but does not inebriate, and a slice of stale bread or toast with a little butter.

Do this for two days, and if you have not had a brisk “physicking,” take next morning another dose. After this, say on the third day, get a good warm bath, about 98° Fahrenheit, and remain in twenty minutes; and every day afterwards, in the morning on rising, take a plunge-bath of cold water and a good rough towel, and “go in lemons” on the skin. Dress as brisk as you like, and take a spurt, slow for

the first few days, of a mile; then come home to breakfast. Here you can rest for ten minutes before eating, then take a good steak, grilled, and a slice of dry stale bread (brown if obtainable); rest, and go out for another walk of not more than a mile for the first few days, and that slowly. Gradually increase the distance and the speed after a few days. Then get home half-an-hour before dinner; rest, and for your dinner either repeat your breakfast meal, or take any plain roasted joint and a potato, but no "greens;" another rest, and a spurt again. Then tea, which should consist of merely a cup of tea with an egg beaten up in it, and a slice of toast or stale bread with butter. No supper; but an hour after tea a good walk, and then to bed. In order to attain this condition, a man must leave off smoking and live a moral life. Now this is all that is required to get into a state of half-condition; but should you require the attainment of full condition, then the walks must extend and quicken gradually. Every bit of superfluous flesh must be taken off (not by physic) by increased, quick, and violent exercise with what is called "the sweaters" on you. Here, you require pluck and self-denial. Fancy, under a burning sun such as we have, to go out walking as fast as you can with half-a-dozen flannel shirts and drawers on, and surmounted with the ordinary

clothing, and a great coat buttoned up over all! Well! this is then what you would have to do to get into condition.

But, say some, "I can't spare the whole day to be walking about like that; I must do my business, and I can't get out in the open air—how then?" Another says, "I am too fat to walk." Another, "I am too thin already without taking physic and sweating." Another replies, "I can't summon up the courage; I'm weary and tired even when I get up, and I am not at all inclined to go out in the open air and walk a mile or two." To one and all of these I must say, "Where there is a will there is a way," and it will be my business to show how you can attain this healthy power of will, and especially to point out the way; but as that cannot be done in this, I will reserve it for my next.

OUR PEDESTRIANS:

“CONDITION.”*

SINCE last month we have had some rare exhibitions of the power of condition over intrinsic gifts. What do I mean by that? Why that, given two persons with equal skill to run a mile race, the slightest “want of condition” in the one loses him the race. The same with horses as with men. How often do we see a duffer beat a race-horse. You say, reader, it’s the duffer wins. No, it’s the trainer. Many of you say, New South Wales always takes the money from the V.R.C., and your remark is a correct one. *Perhaps* she has—nay, I verily believe she possesses better blood for endurance than we do; but we find some of her softer strains of blood keep licking us; nay, we even see her buying our own stock and bringing them back to our racecourse, and taking away the much coveted prize—as see our Miss Florence, purchased from George Petty’s Maribyrnong breeding establishment, taken to Sydney, brought back,

* This paragraph appeared in one of the numbers of that excellent monthly magazine, the *Australian Journal*.

“fit,” by John Tait; she was in the condition to make mincemeat of every two-year-old. She carried off the last race in a canter, and would have beaten everything before her in the first, but for the bad starting—which, by the way, was execrable in each case. But I allude to this as illustrating the effects of condition. John Tait (if you converse with him for two minutes) will tell you that condition wins the race, all things equal; and so particular is he in this respect, that he never allows a horse to have a gallop, or canter, without being present personally to superintend the same; and he does this from the very fact that all horses in their training cannot be treated alike, and that you can as easily overdo the thing as not; and this brings me to the concluding paragraph of my last article.

Now, suppose he is a fat subject, and wishes to get into condition, it is self-evident he cannot be trained like a thin one. In this instance he wants to “take off,” and not to “put on.” I always inculcate this precept as a preliminary to young jockeys’ A B C, and to all who apply to me to go in for training and condition, viz.—“Look on fat as your natural enemy, and shudder at the name as that of a most venomous reptile.” Had I space, I would launch out my invectives at that terrible abomination—fat; but as I have not, I will e’en content myself, gentle

reader, by asking you carefully to weigh yourself—especially if the “gentle reader” has hirsute appendages, and verges on thirty-six years of age.

But let us presume he is fat; then let me warn him how to go to work to get off the nuisance encumbering his body, or much harm may result. For instance, to take a sharp spin, as above mentioned, would be madness, for he would be “out of puff” in no time; or, to use a sporting phrase known amongst trainers, there would be “bellows to mend;” in plain words, he would be greatly distressed; and if there were the slightest tendency to disease of the heart, death might be the consequence. Now, there has been a little pamphlet published on “How to get Fat, and How to get Thin,” by L. L. Smith, and which I see by a recent advertisement is to be issued jointly, and attached to a work on “The Means of Prolonging Life,” in which the whole question of Fat is gone into more elaborately than I can do it here. Suffice it to say, L. L.’s theory is, that all fat is water, *plus* a little charcoal, or carbon. Now, if this be the true case, we can easily understand how a good brisk purgative will carry off a large quantity of fat, when it takes away, by its cathartic properties, water—the basis of fat. Be that as it may, let the fat subject purge himself, by taking two tablespoonfuls of the accompanying mix-

ture three times a day; and I give it here in Latin, so that he can copy it, take it to a chemist, and get it at once dispensed.

R				
Mag. Sulph	...	...	...	℥ ii
Mag. carb.	...	...	...	℥ iii.
Liq. potass	...	...	...	℥ iv.
Sod. carb. ...	...	...	...	℥ i.
Tr. colchici	...	...	...	℥ iii.
Ol. cassiæ ...	...	...	...	m x.
Ol. menth. pip	...	...	...	m x.
Tr. zingib ...	...	...	...	℥ i.
Aqua, ad. ...	...	...	...	℥ vi.

The above mixture, if taken as ordered, will last two days, and will effectually purge, though it will not gripe. During the time it is being taken, gentle exercise can be used, though it must not be severe or violent; and the diet should consist of—for breakfast, a small basin of sago, arrowroot, or rice, but no solid; for dinner, a chop or steak (broiled), no vegetables, but a slice of stale bread; and at night, one cup of tea and slice of stale bread, with a mere sensation of butter.

On the third and following days—for breakfast, a broiled chop, or a steak, not overcooked; stale bread, brown if possible, and one cup of tea. Dinner—a cut from a roasted joint of mutton or beef; one biscuit or slice of toast; a glass of light bitter beer.

Evening—cup of tea, slice of toast. So much for diet. Now, no matter how thirsty he may feel, he must on no account indulge in a drink of water, but he may suck a slice of lemon, and thirst will be relieved by keeping a smooth pebble in the mouth. On the fourth day he may take a walk early in the morning with a couple of greatcoats on, and an undersuit of flannel. He need not walk too far. Let him go as fast and as far until he feels within himself that he is getting tired; then walk home a little more briskly, and afterwards let him lie down on the sofa, with a couple of blankets on him, for twenty minutes; then get up, strip, and wash himself—firstly, all over with warm, afterwards sponge with cold water, and use a rough towel well over spine and loins; then dress leisurely and get breakfast. Rest ten minutes afterwards, and go to his business, but remember the diet. At night, when he has done his work, buttoning up, and putting on his great-coat, let him go smartly home; when he gets there, let him have another cold bath and a rest for twenty minutes, and then let him have his meal. Rest afterwards, and if it pleases, let him take a gentle leisurely walk or stay at home at some pleasurable occupation; but remember abstinence in food and drink. Persevere with this for six days; then take another bottle of the same medicine, and in similar doses. Rest from

violent exercise again two days whilst taking it; then, for the fourth and fifth days, take another smart walk in clothes, gradually extending the distance. Repeat this once more, and all will be advancing towards reducing the too, too solid flesh. Now is the time to begin to put on the spurts up a hill, at a fairish pace; and if you find that there are still puffings and difficulty of breathing, depend on it there is still a lot of fat to be taken off; so that the best course to adopt is to swallow at night, before he attempts the next run, a basinful of thin gruel, having one ounce of sweet spirits of nitre, half an ounce of coriander, and same of caraway seeds, boiled in it, and drank whilst hot; to sweeten it, use about a tablespoonful of treacle; it will add to the sweating power of the gruel. The moment this is swallowed, let him take two or three extra blankets, and cover himself well, not allowing any crevice through which cold air can come; and every now and then, if the man has a foul stomach, give him an emetic, as follows:—Sulphate of zinc, 30 grains; ipecacuanha, 10 grains; dissolve in a tumbler of lukewarm water, and drink off early in the morning; and take a tumbler of lukewarm water as soon as nausea has set in. Repeat the sweatings with blankets as often as is necessary, and the moment the man can find that he can freely run a mile at top speed without being

distressed, that moment he knows he can desist from sweatings, and he is fit to run, after a little practice, with any man.

Let me recapitulate, for our fat friend, abstinence from fluid, after L. L. Smith's theory; abstinence from food which contains fat-producing properties, viz., starch, sugar, and watery food; abstinence from vegetables; purgatives every six days for three times successively; plenty of out-of-door exercise; gradually increased sweating walks, or runs, every fourth or fifth day; about three sweats, the thin gruel and nitre, and when the stomach is foul, an emetic.

Next month I will write of the training of the thin man, and say a word or two on gymnastics.

There are always a number of persons desirous either of airing their knowledge, of improving on the thoughts of others, of gratuitously bestowing on the public some great discovery of their own relative to the matter written on, or of really asking for information. All these are the *bêtes noires* of the regular correspondent on a given subject to a periodical magazine like the *Australian Journal*, which is read and distributed amongst thousands, appealing as it does to the tastes and requirements of so many and diverse classes. Now, I, as the medical correspondent, have continually new views and suggestions

offered to me, and were I to take them up seriatim, my whole time would be occupied, and the pages of this journal filled with medical correspondence. Many of the ideas suggested are good, others are equally bad. Allow me to mention one of the former—that of your fair correspondent “Ivey Armytage”—who, in the columns of this journal, the month before last, soundly rated poor *Colonial Lancet* for his censure on the want of culinary education amongst the rising lady generation. The lady deserves thanks for her well-aimed but highly-courteous defence of her sex, and for her apt critique on my remarks anent the making of a basin of gruel. Fair Ivey gave me a reproof which I shall not soon forget. But the lady must allow me to remark, that I declared at the outset that I thought ladies were being too much abused, and that the whole of the sex were being burdened with too many of the follies and foibles, such as “the girl of the period, &c.,” which belonged only to the few, and were rather the exception than the rule. Now, although I am generally considered a gallant man, I cannot refrain from differing from a lady when that lady says that most of the women of this colony understand cookery. I positively assert they do not, and I assert this from personal knowledge, mixing as I have done for a large number of years, as a professional man, with many thousands of

families. I may give another article on cookery, when I shall be happy to receive a hint or two from so courteous and well-versed a correspondent as "Ivey Armytage." I should say she is, in the language of Wordsworth,

"A perfect woman, nobly planned,
To warn, to comfort, and command."

Another correspondent, who belongs to the class last mentioned—those who are asking for information—wishes to know if I will enlarge upon the article "Condition," and give him my idea of boiled grain. This gentleman dates his letter, Sydney. My answer is that this suggestion is not at all new, for boiled grain was used by the ancient Roman and other *athletæ*, and was reckoned a most excellent food for giving strength; but since that time, *nous avons changé tout cela*; for instance, the ancient trainers gave their men dried figs, and fed them on pork and boiled grains. Well, whether the human stomach has changed or not, I cannot say; but at the present time, if you fed a man on pork, boiled grains, and figs, I think he would soon have what is termed "bellows to mend." But this subject of boiled grains, I can inform your correspondent, is one particularly *apropos* of this article on the means of putting on flesh, and yet remaining in condition; for grain, containing as it does a large quantity of gluten

and starch, the former can give muscle, and the latter supply that amount of carbon, a due quantity of which is requisite for the purpose of supplying the lungs with carbon, and prevent the waste of muscular tissue.

A spare man to train himself into condition and put on muscle, must go more quietly and deliberately to work; in plain words, he must take more time. Although spare, let him take a dose or two of physic, such as is ordered by me in page 78, but let him not take the whole bottleful, as a good brisk purge is all that is necessary. Whilst taking it, and for the first two days, let him diet as follows:—Breakfast, a basin of milk, with two raw eggs beaten up, and a slice of stale bread; add a little sugar, and if you like, spice, to the milk. Dinner, a plain chop cooked on the gridiron; stale bread. At night, a basin of milk, and a slice of stale bread. Let him take a little exercise between his meals, and a warm bath each day, with plenty of soap, and a cold shower immediately after it.

On the third day, let him get the following mixture:—Citrate of iron and quinine, one ounce; dissolve well in a pint and a half of water; take two small table-spoonfuls three times a day, and with it, every other night, a five-grain compound rhubarb pill, to keep the bowels gently moved, if they are at all constipated by the above mixture.

And now as to exercise. Let it be distinctly understood, that according to the condition of weakness and habitude of the person desirous of training, must this exercise be taken. If it is a person of previously sedentary habits, let him commence very cautiously, but make him at the same time punctually and regularly take it. The best rule I can lay down for him is, to take such an amount of exercise as will cause him to feel tired, without being exhausted. The course will be as follows:—On rising, have a small basin of milk, with a dessert-spoonful of old rum or whisky and a little crushed sugar, a small rusk, or crust of bread. Then strip and sponge the whole surface of the body over with cold water, and use a rough towel; dress quickly, and go out for a walk of about a mile, or less if there is any fatigue. Let him go out with a friend, if possible, or a dog; in fact with anything which will divert his thoughts—for I may here remark that in walking he requires not only to develope the muscles, but also to stimulate and add tone to the nervous system, and this the companionship most effectually does. But to return—this walk must be at first very moderate in speed. Then let him go back after his gentle walk to breakfast, which should consist of a cup of chocolate made from the nibs and boiled, and with milk added; a chop or steak and a slice of stale bread,

with, afterwards, a slice of bread and honey. Let there be rest before and after eating. Then an hour and a half after breakfast, a mile walk and a turn or two with the dumb-bells, rest, and dinner, which should consist of a broiled steak, or a cut from a roasted joint of mutton or beef, a single potato, and a light pudding made with eggs and milk; an hour's chat, and half a pint of good bitter ale or first-class stout. Then, if there is a river close at hand, a walk to it, and a gentle pull for half an hour in a light boat; or, if he has a friend and a large room, a bout at single-stick or fencing, and a gentle walk. Supper not later than six. A cup of tea, or coffee with chicory, and the yolks of two eggs beaten up with it in place of milk, a slice of stale brown bread, and a little fresh butter or honey. Rest after it, take half an hour's walk, read some light work, strip at nine o'clock, sponge the body over with cold water, and use a rough towel, and get into bed by half-past nine. Let the bed be a hard one, and the room well ventilated. Follow this up for a few days, till the body has become accustomed to the change and to the exercise, then *gradually* increase the distance and the speed, *remembering always that the man who is not habituated to much exercise may do himself a great amount of injury by much exertion at first*; nay, he may produce disease of the heart or arteries, and lay

in a mass of untold calamities, by not *preparing* his body for hard work ; but if he will but exercise his judgment in the matter, and proportion his exertions to his strength, he will find his constitution, especially in this climate, kindly answer to the calls made upon it.

But I find I have so many hints to give and rules to lay down, that I must reserve my further remarks for the next issue.

My readers will doubtless now have a fair, clear, and untechnical idea of how to obtain *condition*—whether they be fat or lean—and they will see that there is not one-half the mystery in it which trainers profess ; in plain words, there is no secret at all, the great art being to follow up the laws of nature. These laws are simple enough ; and from my previous articles it will be seen they are easily practised. I shall now, however, give a number of deductions of a more scientific character, based on the observation of these laws, and on a thorough knowledge of Physiology, and which could not and cannot be known by the lay reader. These laws apply equally to the biped as to the quadruped, with the exception of a few details ; and I here remember one which I must inculcate upon all, whether training or not, viz., that the grand principle is to keep your mouth shut. Certainly this applies in ordinary life and its

social relations, it will be said, referring to it in a conversational point of view; and a most excellent maxim it is, especially for professional men, to follow, but a difficult one, they say, for the softer sex to imitate. However, I am alluding to it in another point—namely, in a sanatory view. The lungs are very delicate organs, and a blast of cold air suddenly taken in through the open mouth has often been the precursor of a fatal pulmonary affection; but by at first closing the mouth, and allowing the air to pass through the nostrils, the current gradually gets warmed before it enters through the pulmonary tubes into the cellular tissue of the lungs—thus the sudden change is avoided. Even in bed let the mouth be closed. If it is not done by my readers for a sanatory purpose, at least let it be done for the saving of a great nuisance, or, to say the least of it, an unpoetical and not at all euphonious action, viz., snoring. And now for the general rules above referred to.

Bodily exercise diminishes the quantity of urine, the reason being that a large amount of perspiration is evolved, which relieves the kidneys from a great amount of work. Hence you will perceive that should you have disease of the kidneys, by gradually exercising and getting the skin into condition, you can very much assist the powers of nature to restore the diseased organ to a healthy condition. Exercise,

by the same rule, diminishes the weight of the body. When the exercise has ceased, perspiration becomes to a considerable amount arrested, unless the person puts on extra clothing, and rests in it, as was mentioned in a former article; but if the exerciser, whilst resting, drinks water, strange as it may appear, the body diminishes in weight; and the reason is, that of course, to get rid of this fluid, the pores of the skin and kidneys set to work to excrete this fluid, and with it in solution are contained various salts. If the fluid is drunk whilst the exerciser is "hard at it," and perspiring, then the weight of the body is increased, because the body retains the fluid in order that there may be a reservoir from which it may draw future supplies of perspiration. Now, though I have stated that exercise has diminished the amount of urine, still, the important salt of that excretion—viz., uric acid—is increased, and as that acid contains highly nutritious elements, you can still further perceive how the body can become diminished by increased exercise, and how, still further, it is that with exercise, or rather hard work of any kind, and inadequate food, the body becomes emaciated. Fœcal evacuations are diminished by exercise. In plain words, costiveness is engendered, and this again is due to the water passing away through the skin instead of by its natural channels.

During exercise, sulphuric acid (oil of vitriol) is increased, but this may be because the fluid in bulk is diminished, and therefore the acid concentrated; for the latter, it is said, does not pass off by the skin—at least so physiologists state; but any one who has taken a Turkish bath, and who for information will put the tip of his tongue to his skin, will find that there is a large amount of that acid escaping, and I throw this observation out for the information of physiologists generally. Now, opposed to this generally received notion, we come to the positive ascertained fact, that common salt, or chloride of sodium as it is termed, does pass away by the skin, and thus you will find that the salt is deficient in the urine.

Carbonic acid gas, which we are constantly eliminating both by lungs and skin, is considerably secreted or thrown off by exercise, and this is obvious, because the number of inspirations by this circulation being increased, the oxygen of the atmosphere combines more readily with the carbon or wasted tissues of the body, and when oxygen and carbon meet, carbonic acid gas is the result; therefore, the more readily and frequently it meets, the more will be formed. Besides which, the increased exercise means increased wear, and increased wear means augmented friction, and the latter means waste material. Now,

the waste material, as I have formerly shown, is carbon, and hence by increased exercise we get increased carbon, and from the same cause we get an increased number of respirations and eliminations of carbonic acid gas. Now, again, you perceive how it is the body loses weight by increased exercise, for carbon is here known as fat and waste tissue, and if you get rid of a large quantity by respiration, naturally you get increased loss of tissue, and become thinner and lighter in weight. And this will show you how it is you get hotter during exercise than otherwise, because this very formation and elimination of carbonic acid gas is nothing more than (as I told you in my article on Respiration) combustion; and of course, the more coals are put on the fire when in full burning, the hotter the fire will become; so in increasing the circulation by exercise, the more you bring the carbon to the air in the lungs to be burned, the hotter the body will be. I may, however, incidentally mention here, that of course it is not only in the lungs that this combustion occurs, for the air is carried by the blood to the very end of the tissues of the body, and there causes this same combustion, or change, to take place. And speaking of heat I may mention that the highest heat of the body is at mid-day—the lowest in the morning.

Now please remember, therefore, this maxim, that

exercise diminishes the weight of the body, and that the more you take, the more food you require to supply this waste. On the contrary, the more sleep a man has the less food he requires, and the more that food is concentrated, or has great nutrient qualities in small bulk, the better. Take the natives of the Pampas, who live in the saddle nearly all their lives, sleeping and resting but little; they live on the muscular parts of animals dried in the sun, called jerked beef. Many persons who have exerted themselves by going great distances, and drawing thus on their physical powers, have lived on dry beef and water alone. If any of my readers, then, from the statements I have given, or from the laudable desire of attaining condition, attempt exercise, let them remember that to abstain from a generous diet is to injure instead of to benefit themselves, and not only that, but it also injures their mental powers, for to take much exercise and little food is to cause the body to feed on the brain; there is a direct sympathy between the two. Remember the lines of Butler, who says—

“ Was ever Tartar fierce or cruel
Upon the strength of water gruel?
But who shall stand his raging force
When first he rides, then eats, his horse?”

Though I have told you that this concentrated

food is good in these cases, like two-year-old oats for a horse in training, I do not wish you to think I advocate a diet either solely animal or vegetable, but a mixed diet in training as in ordinary life; only let it contain CONCENTRATED nutritious matter. Any fancy of a single peculiar food always brings the following epigram to my mind:—

“ ‘Abstain from flesh !’ Ricardus cries,
‘ ’Twill make you candid, just, and wise ;’
‘ Just, candid, wise ! Pythagorean,
Feed *thou* on *pulse*, *roast beef* we feed on !’ ”

I trust the few hints I have given here, with a few scientific facts, will not be thrown away, and I hope they will tend to assist in increasing the love of physical training in our young, and even old. Remember, however, the golden adage to avoid excesses, as you can thus, as I have above shown, entail disease. A state of half-condition is that which every man having respect for himself should desire to attain. Keep so, and every doctor of medicine will be driven into the Insolvent Court.

CONCERNING AN INSIDIOUS AND DEADLY ENEMY.

WE build fine houses for the rich, and the poor erect habitations to keep out the cold and the inclemency of the weather; but in both instances, whilst we do this, we carefully make provision to retain an enemy there, whose presence is sure, perhaps slow, *but certain death*. I allude to the results of the decomposition of organic and inorganic matters in the shape of gases, containing within themselves the germs of numerous diseases, there being no provision made in our dwellings for the escape of these noxious bodies.

Now, I have no objection to a bloated capitalist committing suicide in this manner if he pleases, because his wealth can be disseminated; and, as a practising medical man here, I have more chance to get a crumb from the table of the number than from that of the rich one only; therefore, if, in building his house, he likes to do so in such a way as to retain all the deadly odours around him, and make no loophole for their exit, why, so much the better for the doctor in attendance, and the undertaker afterwards; but I do object to his congregating

around him a number of other human beings—say his family and servants—and compelling them also to sacrifice themselves, for then he is guilty of murder, and should be punished accordingly. In plain words, when building a house, a man must take into consideration his moral responsibilities, for by the accumulation of noxious gases he not only makes his family and servants ill, by obliging them to breathe the concentrated and accumulated gases, but by their illness, especially if it assume the form of fever, or cholera, or other disease of an infectious nature, he endangers the happiness, health, and lives of his neighbours, and perhaps those of a whole community.

I believe it to be the business, therefore, of the State to step in and compel its citizens so to build their dwellings as to insure the health of its inmates, or to cause them to make provision to get rid of these poisons, either by their instantaneous removal, or being there, to employ such known agents as will effectually destroy their deleterious properties. There cannot be a better illustration of the urgency of such a compulsory sanitary law than the fact that at present we are sending for immigrants to populate our land, whilst, by the want of this law, we are depopulating it, or rather, are trying our best to do so. When people are so oblivious of their interests as to be disregardful of their own lives, it behoves the

State, I repeat, to step in and compel them to remember that they, individually, are a part of the body politic, upon the same principle that a man is not allowed by the law to cut his own throat, although it may be a pleasure for him to indulge in the luxury.

A man cannot plead as an excuse that he is not conscious that he has surrounded himself with these deleterious gases, or death-dealing poisons, for Nature has attached an alarum bell to each one, in the shape of smells, which are naturally offensive to our senses, and by the instrumentality of which we are naturally warned to avoid them.

By an inquiry into what is a mal-odour, and its origin, we shall arrive at a clear definition of its meaning, the manner in which it acts on the constitution, and the ready means, by a simple, yet scientific process, of thoroughly and effectually removing it; in fact of totally destroying it. A mal-odour, or bad smell, then, is a gas emitted from a decomposing organic body, and decomposition means the resolving or separating of a constituent mass, aided by moisture, into its primary elements. Now, it is sufficient for our purpose to state that the chief elements of a decomposed animal or vegetable compound are hydrogen gas, a simple gas, and two other compound bodies called ammonia and sulphurous acid gas. All these are volatile, that is, ascend and permeate the air, and

are thus easily and readily received into the lungs of those who are in their neighbourhood. You will remember that, in the article on respiration, I showed how the blood came to the air-cells to meet with the air, and the changes which took place there through such contact. You can readily understand then how *directly* the blood can become infected by any poisonous matter mixed with that air. Take, as an illustration, the effects of one of these very gases, namely, ammonia, which is used when a lady is fainting; cause the patient to smell this, and breathe it, and she revives. Professor Halford's system is based on this very simple method, suggested by an article in one of our daily papers from a recommendation by a medical man of applying the remedy *direct* to the blood. This article was upon the effects of carbolic acid in snake-bites. I must here pause for a moment to observe that these gases are not only injurious in themselves, but they seem to have the effect of increasing the intensity of the poisons of any contagious diseases which at the time may be prevalent. For instance, in Paris, during the prevalence of typhus fever, it was found that in one hospital, where the wards were contiguous to a sewer, the mortality was most terrible. Another peculiarity of these gases is, that woollen, cotton, and clothes which retain air, as likewise a confined atmosphere, hold them in a

concentrated degree, but polished and smooth surfaces act contrarily—a good hint for all to have smooth and not flock papers on their walls, and but little woollen materials or many curtains in their bed- or sitting-rooms. However, this is a divergence. The effects of these mephitical gases upon the system show that the nervous system is chiefly acted upon, and many of my readers who have suffered from some, more or less, of the following symptoms, will perhaps now take the trouble (if not for themselves, at least for their families), and examine their dwellings to discover if there is not some foul drain or mal-odour which is producing these symptoms upon them, and by removing the cause, get rid of the symptoms, and avert worse consequences. The effect, then, of breathing these foul exhalations is more or less as follows:—Debility, not caring to move about much, a despondency and irritability of mind, sometimes a giddiness, want of appetite, shivering, and easily catching cold, a feeling as if the legs refused their office, often purging and vomiting, and even convulsions.

I am often called to cases like these, and a mere change of air—for that is what I recommend first—is nearly sure to cure the patient without any medicine whatever. Why I insist first on change of air is, because if you tell your patient, or his relatives,

that it is the want of drainage, or a foul cesspit, which is producing the malady, they will not remove it, but argue the question—for the remedy is too simple for them; but patients will take the change of air, and once removed from the cause of the disease, they get well, and during their absence, you can easily point out the evil, and then it is remedied. I shall, however, revert to this and other matters appertaining to the effects on the system hereafter.

Having stated what decomposition is, which the chief poisonous gases given off from such decomposing masses are, their nature, and their effects on the system, we will take a comprehensive view of the various known methods of destroying, or attempting to destroy, these poisonous effluvia; and when I say comprehensive, I use the word in its true sense; and shall attempt to make this paper a thorough, exhaustive one, and I trust that my readers by this time will see the importance of the subject, and pardon me, if, for the sake of such importance, I am prolix, for I shall have to enter fully into the matter of Deodorisation.

Well, then, presuming I have my reader's permission, I at once enter *in medias res*, simply premising that *deodorising* is to remove a bad smell, and *disinfecting* is to destroy it,

The objects principally sought after in the decomposition and disinfection of excreta and decomposing bodies are threefold, namely—first, a sanatory one; secondly, economy in the cost and labour of the material employed; and, lastly, that the decomposing matter shall not be injured by the material used for disinfection, but shall afterwards be used as a manure; thus rendering useful and reproductive that which otherwise would have been a source of disease, injury, and waste.

These seem simple enough; but with respect to the nightsoil question—to which I shall chiefly here confine my remarks—I may observe that it is and has been a question that the clearest-headed and most talented men of practical science have, up to the present time, been unable to satisfactorily settle. Many plans have been submitted to overcome the engineering difficulties of removing the waste of a city to a distance, and millions of money have been expended upon a system of sewers in the metropolis of England, with a view to carry off the deadly decomposing fœcal matter; but after this enormous expenditure of labour and capital, the experiment has been found to be not only a great mistake, but a gigantic failure in a sanatory point of view. Without, however, going into the various systems, let me

at once plunge into the real difficulty; and let us here distinctly ascertain what is required, and how far science and experience are able to assist us.

Liebig, in his observations on the question, states that "no honour can be too great for the man who shall discover an effectual and cheap disinfectant, such as every man, woman, and child, could handle with impunity." I quote from memory. Numerous efforts of eminent chemists have been directed to obtain this valuable desideratum—an effective and cheap disinfectant; but hitherto these efforts, though frequently tested by several public and private companies in England and elsewhere, have not fulfilled the desired expectations formed by their originators. At one time, my readers will recollect, that "earth" and clay were to be the grand panacea, and certainly they have done much to bring about a reform in the closet system; but however successful they have been found to work in cold climates, they have signally failed in India, here, and in other hot climates. After this a great noise was made in the scientific world by a discovery that nitric acid was not only the most effectual agent, but also the cheapest, and although the discoverer managed to get an award of some £5000 from the British Parliament as a substantial recognition of his services, the nitric-acid theory fell through, perhaps because

of its expense, and also because nitric acid, or aquafortis, is a dangerous thing even for experienced persons to handle. Chloride of lime and chloride of zinc, in concentrated forms, and manufactured in several ways, have for years been used on a limited scale; carbolic acid and carbolate of lime have been and are even now frequently used, and most successfully too, it is said by many chemists. But although it is used as a powerful disinfectant—which an active salt of tar might reasonably be supposed to be—its peculiarly disagreeable smell is to many nearly as unpleasant as the smell it is employed to put down. Sulphate of alumina (common alum) has superseded the use of sulphate of iron, which was formerly much employed by direction of the French Government, and it is now pronounced the best and cheapest disinfectant that can be used in a large way.

Having thus briefly run through the leading deodorants and disinfectants in use, let us take into our immediate consideration the value of a recent discovery made by a gentleman who has for many years, to my own knowledge and to that of many others, toiled and persevered to develop several of our natural resources, with a view to convert our waste refuse matters into a valuable description of artificial or chemical manure. The new mineral substance

recently discovered by him, and which has been tried by several public bodies here with the greatest success, is called by its discoverer "the Chloro-alkaline Deodoriser." It is found in a natural state near Geelong, and it contains about thirty-three per cent. of chlorine, in the form of perchloride of iron combined with alumina. Wherever the mineral in a prepared form has been used, the effects might be called magical. It is without any smell in itself, and it immediately kills the most offensive odours, particularly the gases mentioned in the commencement of this article.

After distinguishing, in my last, the difference between a deodorant and disinfectant, and enumerating the various deodorants which have from time to time been advertised, extolled, and ultimately abandoned, either on account of their cost, or because they were only partial deodorants, or because they destroyed the manure; and having pointed out that there are three principal objects in deodorising—1st, sanitation; 2nd, economy in cost of the material used; and lastly, that the decomposing material shall not be injured, but, if anything, improved in its fertilising properties, by the agent applied—I mentioned a deodorant to which, I trust, all scientific men will pay attention, and which every householder, farmer, and, I might even add, statesman, should study.

I allude to the lately-discovered "Chloro-alkaline Deodoriser." I stated that this had thirty-three per cent. of chlorine in its composition; that, chemically, it was a perchloride of iron combined with alumina; and that it was a natural product of this colony. Now, let me further state that I have examined books without number on chemistry, and I have not been able to discover whether it has ever been seen in a natural state in any other part of the world, so that Geelong has at last established itself as a pivot, not only of Victoria, but of the whole world.

What are the properties, then, of the chloro-alkaline deodoriser, and how does it act? Whenever the mineral, in a prepared form, is sprinkled about in a chamber or closet pervaded by stink, as, for instance, that of nightsoil, or any decomposing matter, the effect is magical. Deficient of smell itself, it removes the original odour totally, and leaves no smell whatever after it. Now, let us watch, chemically, how this is effected; and having done so, let us also see how the farmer can be benefited, the landlord remunerated, the tenant's life preserved, and the "insidious and deadly enemy," mentioned at the commencement of this article, at once destroyed. We will begin with the chemical action. The emanations from nightsoil and other decomposing bodies can, for our illustration, be divided into sulphuretted

hydrogen and ammonia. If, then, this chloro-alkaline is sprinkled over a cesspit, the chlorine gas of the mineral leaves the iron, with which it is feebly united, to attack the hydrogen of the foul gas, and this forms hydrochloric acid, which acid has a strong affinity for the ammonia, which it attacks, and forms a hydrochlorate of ammonia, better known in commerce as sal ammoniac. This latter article is the most valuable article of manure which we possess, and thus you see that this, which was passing away in waste vapour, or gas, a poisoner of the air, is fixed in the manure, and a powerful fertiliser is the result, quite equal to a concentrated Peruvian guano. And now comes a little dry detail for my readers. The solid constituents of the prepared chloro-alkaline deodoriser arrange themselves by a slower process with the solid parts of the excrementitious matter operated on. I presume the sulphurous acid becomes sulphuric, uniting with the iron (of the perchloride), whilst the alumina becomes a powerful absorbent to bring the whole into intimate mixture for manurial purposes.

My readers will perceive that this discovery is likely to be of the greatest use in this colony. By its agency we have a highly *deleterious and poisonous gas turned into a SOLID SALT*, and a fertilising body of the most concentrated character produced for the

farmer; and what is more, we have here overcome the great difficulty of having a deodorant which is not deleterious to the manure—the grand desideratum in deodorising, and one which the scientific agriculturist has continually looked out for, hitherto without success.

Let me give an illustration. The Corporation of Melbourne have up to now been using for the water-closets, as a deodoriser, coal-tar, the refuse of our gasworks. The farmer knows that this is antagonistic to vegetable life, and consequently no one has purchased the contents of our cesspits, and the whole of the fœcal matter of this large city has been wasted, whilst our suburban lands are actually dying out from exhaustion—the want of a fertilising agent. Is not this waste, and reckless prodigality? Is not this tending to a certain national bankruptcy? We are continually exhausting our soil, and taking away from it the whole productive power, and yet returning nothing to it; but, with a prodigality which, in these enlightened days, is absolutely fatuous, we are actually wilfully destroying it. We put ourselves forward as an agricultural community, and we throw open our lands, and yet we make no use of the very material that would enrich our lands, and make them valuable.

Now let me direct the attention of my medical

brethren and the enlightened portion of the public to a hint as to the origin of many of those new diseases which have lately sprung up and puzzled the leading members of our profession at home. We know that in this colony even the question has been raised as to whether or not diphtheria is a new or old disease; some contending that it is only a malignant croup, &c., whilst others state that it is a new disease, &c. I simply give this as a familiar illustration. There are numberless diseases which the observant medical man knows that none of our old masters have ever written on, and they are troubled, in the conscientious discharge of their duties, how to classify and, consequently, treat them. Now, if I remember rightly—and I wish it to be thoroughly understood I am only speaking from memory—a Royal Commission of the leading physicians and scientific men of England, France, and Germany, was appointed to inquire into the origin of certain new types of disease which had simultaneously made their appearance in different portions of the countries above-named, and which had baffled the diagnosis of the chief medical men of the day.

The Royal Commission thus appointed followed up a series of searching inquiries in every town, taking notes and evidence from a variety of sources, spreading over an immense extent of territory, having

different nationalities and customs. I cannot remember how long these labours were continued, but it was some two or three years before their deliberations were brought to a close; and the report dwelt on the overcrowding of cities, ill-ventilation, bad drainage, &c.; but what impressed itself chiefly on my mind was the winding up, which stated that the introduction of *fresh* nightsoil had been very extensively practised by the farmers and market-gardeners, without first neutralising the animal, vegetable, or even mineral poisons originally contained in it. In all those places where the types of disease never before known had appeared—and these types were particularly marked near those towns where the farmers and market-gardeners had relied, for cheapness' sake, on the fresh nightsoil to replenish the waste resulting from successive crops, and which nightsoil was carted and placed directly on the land—the Royal Commission urgently called upon their respective Governments to take immediate steps for giving suitable instruction to the different municipal bodies having charge of the local public health and comfort, to prevent the use of unprepared nightsoil in their respective localities, and to order that it should go through some process of disinfection before being sold or used for manurial purposes.

Then followed a host of artificial manufactures, of

every kind, from "steam-dried nightsoil guano," "chemical or carbonised," ditto, through a dozen varieties, having for their basis some well-known disinfectant agent worked into manure of various properties.

In the majority of these cases, however, the farmer and gardener found that those very agents which were used as disinfectants destroyed the manurial property of the nightsoil, and this has engendered in the minds of the tiller of the soil an antipathy—and, up to the present time, a just one—against chemical nightsoil manures. Take, for instance, the drying. We all know that ammonia is of the most volatile substance; if, then, this is dried without fixing the gas, the resulting manure is deprived of the most nutritious element. I will give an illustration. Caustic lime, in itself a manurial substance, has been used for deodorising, and is the basis of the majority of the disinfectants; now, the use of caustic lime causes the ammonia to be lost, whilst the organic matter is so injured as to bear little or no manurial value; and yet this is a practice faithfully and obstinately followed up at the present day by our farmers.

Another illustration. The town of Leicester, in England, was deodorised on a very large scale some years ago, at the expense of the Corporation, and it

was expected that the expense—some £20,000—would be returned to the Corporation by the sale of the deodorised native guano to the surrounding farmers. It crept out, however, that the ingredient used as a deodorant, though very effective in a sanitary point of view, had totally destroyed that which was good originally in the city refuse; therefore, no farmer would purchase it, and the Corporation had to bear the whole cost.

Now, on the other hand, where science is practically applied, the reverse of the picture will be seen, clearly bearing out the first part of my remarks in this article respecting the waste of the fertilising agents. In a well-known quarter in Bermondsey, near London, stood, some years ago, a large heap of spent tan, or tanner's waste, which kept on increasing till it became a public nuisance, besides occupying the site of valuable business grounds. The local authorities looked at the removal of such a vast heap with considerable dismay, at any probable cost. A chemist of humble pretensions, however, came to their assistance, with an offer to remove the whole mass at a shilling a load. The Corporation were considering the offer, and were about to accept it, when it oozed out that the chemist offered *them* a shilling a load for the privilege of removing it, and great was their relief and astonishment. It need not

be said that they gladly accepted the offer; the contract was signed, sealed and delivered, and much wonder was expressed as to what the man was going to do with the stuff. The sequel speedily showed. The waste tan was mixed with the refuse blood and offal of the city and surrounding abattoirs, removed to a sequestered spot near Gravesend, and there converted into "Patent Blood Guano." In less than two years this poor but thoughtful chemist sold the patent tan, &c., to a public company for £10,000. The manure produced excellent results and good profits.

I have exceeded my limits, but the importance of this subject in a sanatory, agricultural, and, in fact, national point of view, must be my excuse. I shall revert once more to it in my next. In the meantime, I would ask my readers to hand this to any farming friends; and if they have any acquaintances in the various corporations, to ask them to read the first, this, and succeeding articles.

Walking through Fitzroy Gardens, my olfactory organs were assailed by one of the most powerful, disgusting, and overcoming odours that it is possible to conceive. Simultaneously with the stink, came trooping along a number of children with their attendant nurse-girls. I could not help thinking at the time that the Government and the heads of the

people were criminally liable for laying out a trap for innocent childhood, seeking after health, to fall into. "For here," said I, "is a beautiful garden, pretty shrubs, fine trees, good walks, handsome statues, and everything that can tempt you with the idea of beauty and health; but THERE, in that horrid stinking drain, lie the hideous seeds of disease and ultimate death." The Government and municipal authorities lure children and invalids by these outward shows of restorers to health, whilst they wilfully and with knowledge aforethought provide a means by which their invited guests will get their blood poisoned by these terrible and surely blighting miasma. Why, here is a representation of the Borgia business; for, reader, it is nothing more. You call these gardens one of the lungs of the city; it is a foul, polluting, and rotten lung, which will disseminate disease throughout the whole system. I would not feel so strongly on this subject were this foul, disease-generating spot situated in an equally foul place, or in a ruin, or some repulsive place; but to have all lovely around it to entice the exhausted in frame, the recovering invalid, the gentle and weakly child, there, under the guise that they will breathe fresh, invigorating air, and then to poison that very air with the foulest of emanations, and lay the foundation for a set of diseases akin to the typhoid charac-

ter, causing frequently, in the case of the hoping and trusting weakened valetudinarian, a relapse to his former disease, and to the weak baby in arms a poisoned blood, which, earlier or later, will inevitably make itself shown, seems to me to be a criminal act upon the part of the authorities. We pray for immigration, and yet we are, by this simple means, certainly decimating our rising generation. If this is the case now, how will it be in the hot weather?

I think that the discovery of a deodorant and disinfectant which is known quietly to do its work, leaving no bad smell after it, and this very article showing, as clearly as it is possible, the nature and effects of an aerial poison on the animal economy, is of the greatest interest to every landowner, house-proprietor, tenant, and to every man, woman, and child in this country. I know, and I am sure hundreds of my readers could mention similar instances, where there are water-closets which never get emptied, and it is the wonder of the neighbours that such is the case; nevertheless, it is true. I can call to my mind one house in Collingwood belonging to a gentleman, who lets it to a poor family. His boast is that he has had the place fifteen years, and neither he or his tenant ever have paid a sixpence to have the cesspit emptied. "It always," he says, "keeps at a certain level, and never rises above it."

Now, where does this go? Why, it trickles and percolates through the soil and subsoil, and it passes around and around, and insidiously works its way; and one of these seasons (as, for instance, after this wet one) a hot—a burning hot—sun will cause these poisonous miasma to rise, and cholera, typhus, or some frightful epidemic will ensue, and deal deadly destruction around. This is the *deadly*, INSIDIOUS enemy I am alluding to in the heading of my first chapter. It is not the stinks of the boiling-down establishment, of the tanners or fell-mongers, which do the mischief, though they are bad enough; but it is this terrible insidious devil, that gives but little warning of its approach, and which gradually, but surely, undermines and poisons the *blood* of its victims, making them an easy prey to any passing epidemic.

I know this cry to the landlord on the score of health has little effect, but I will appeal to a more powerful agent on his feelings—his pocket. The landlord knows, or should know, that there are many houses in this city that very few people will live in, and those generally suffer for their temerity; and I have in my eye now certain houses, situated in Bourke-street west, which are nearly always empty; and why? Because it is known that to live there is to bring on ill-health, and gradually the houses have

got a bad name, and don't let readily. Therefore, you see, the landlord is interested pecuniarily in this matter; and I ask them, therefore, for their self-interests, to use a deodorant and disinfectant, or cause it to be used, on the premises they let.

But, I would urge, this is not a subject only for individuals: it is a matter, in a hot climate like this, where we have these great seasons of rain, for the Government itself to take it up, and make it compulsory that a proper deodorant should be used in every establishment; that no nightman should be allowed by law to empty a water-closet, to the manifest nuisance of his neighbours, unless the same was thoroughly inoffensive. Except this is a State matter, the old adage comes true, that "what is everybody's business is no one's affair." For instance, everybody complains of his neighbour, but he seldom looks at home; and if he himself is complained of, he feels that somehow a great injustice is done, and, therefore, he seldom sets to work to put his own house in order.

What we want is a thoroughly comprehensive scheme *to prevent the causes of sickness*. We look too little after that; our attention is mainly paid to the curing of them, or the remedying of them, when they have appeared. The hot weather will shortly be upon us; history, our own modern experience in

all parts of the world, with similar and dissimilar climates, shows us the cause of the outbreaks of those terrible epidemics which lay low, at least, one loving heart in every household; yet, with a thorough consciousness of the certainty that we have for years and years disregarded the laws which govern these epidemics, here are we making no provision to guard against the evil, and to meet it when it does come. We rest securely, because, forsooth, we have hitherto escaped the penalty of our utter disregard of the commonest laws of hygiene.

Take another matter, which should still further illustrate my remark of an insidious and deadly enemy being amongst us. We have stagnant pools and marshy swamps, which are receiving the putrid, filthy filterings of the towns surrounding us. Look at the marsh round Emerald Hill, reeking with stagnant water, green, saturated with all the muck and filth that can be thrown there—with dead dogs, cats, &c., all decomposing, and waiting for the warm weather. Look at the Sandridge lagoon; nay, don't look at it, but smell it a mile or two off. See the Flemington side of the city of Melbourne—the marshes reeking with decomposing animal and vegetable matter, and that, too, close to our Benevolent Asylum and poorer class of citizens, whose vitality being low, are more susceptible to catch typhus and other similar diseases

than their more powerful brethren. Look at the pestilential flats of Collingwood and Richmond; and let us pause and think carefully of our position and future prospects, situated as we are in their midst. Now, what I mention here of the city of Melbourne is applicable, as I can speak from personal supervision, of nearly every inland town. Let us, then, pause, and see if there are no means—no practical and scientific means—of remedying this; and that, too, not at a loss, but a pecuniary benefit to the colony, and I think we possess it in our advanced knowledge of sanatory laws, and in the late discovery of the “chloro-alkaline deodoriser and disinfectant.” Of the application of these laws, and the various other hints and suggestions promised by me in my former numbers, I will speak in my next article.

HOW TO UTILISE HIM.

I MENTIONED in my last that the blood-poisoning of the people of Melbourne, and the inland towns both of this and the neighbouring colonies, is not so much (I will take Melbourne as an instance) due to the emanations from boiling-down establishments, bone-mills, tanners' yards, or the stinks of fellmongers' woolsheds, &c." These are certainly nuisances, and are offensive to the nostrils, and are obnoxious; but they are not "the deadly, insidious enemy." It is to the low-lying outskirts, such as the lagoons of Sandridge, and the pestilential flats of Collingwood on the other side, and the North Melbourne swamp on another side. It is into these receptacles all the filth of the city drains, where all the muck converges both from city and suburb; here accumulate, on land undrained, the carcasses of dogs, horses, offal of all kinds, used and unused vegetable matters, together frequently with nightsoil surreptitiously placed or drained there. These lie latent frequently during the winter, but they are festering and chemically changing. Decomposition in every shape is setting

in, until at last the heat comes, and then the gases are disengaged; those which were formerly mere solid animal and vegetable matters become changed into gaseous bodies known as sulphur, nitrogen, and ammonia. These are the gases which are poisonous, and they are carried over the city by the winds. They enter into our dwellings; they hang about our woollen material, around the curtains, on the flock of our wall-papers, waiting for an opportunity, for a moment of sickness, when the body is weak, to seize upon its victim and fasten on his blood, insidiously change and alter its total composition; and in this moment of weakness to kill its victim.

How many of my fellow-citizens have I seen thus destroyed—ruthlessly cut down! You spend money on immigration, and provide means of poisoning the moment they arrive! You make and preserve hot-beds for decomposition to set in, and you cause to be issued from them malignant miasma, with the thorough knowledge that death must result. I have here spoken merely of the duty of the State—of corporate bodies. We build town halls for £100,000; we build our post-offices, our legislative buildings, on a magnificent scale; but that which is to give life and vigour to our citizens—a pure atmosphere—we neglect. Our drainage and sewerage are idiotically and suicidally overlooked; and yet we are surprised

that scarlatina, diphtheria, and a host of other fatal diseases cut off our young. We bring innocent lambs into the world to—slaughter them. This is only what takes place under our eye at the present. For years I have written and warned the public on this subject, by lectures and otherwise; but supinely does that public wait for its inevitable doom. Shortly a plague will break forth in this colony, and the laws of hygiene, which have been so contemptuously broken, will issue forth and avenge themselves. I ask you one and all, for it is in your collective capacity I speak, will you unite? It is by united action alone that you can overcome this inertia of those in authority. Co-operate and agitate! If you require any political matter carried, you hold meeting after meeting; you agitate, and the thing is carried. Now, why not do the same where your lives are at stake? Let us call a meeting in Melbourne, and throughout the towns of Victoria, and compel the Corporation and the Government to unite together to bring about a sanitary reform in the sewerage and other questions of public health. I admit that some amount of attention has been paid to this matter since I commenced writing these articles, and the Noxious Trades Commission has been appointed, and a few leading articles have been published in our dailies; but I am afraid it will

flicker like the finishing splutter of a burnt-out candle, and it will leave only a greater stink behind. The very composition of the Noxious Commission is sufficient to damn it; its chairman, with his antiquated old-school notions, prejudiced, and totally unfitted for the post. I would suggest that each corporate body have appointed under their health officer, whose decision shall be final, a body of men, whose duty it shall be to arbitrarily carry out the provisions of the Central Board of Health, to practise, irrespective of persons, deodorisation and cleanliness, remove all causes of stink, cause ill-built and ill-ventilated places to be limewashed or washed with some disinfecting agent, and in all hovels and waterclosets let there be a vigorous application of the disinfecting brush. Let there be also, no matter at what cost—for the saving of human life must be of greater consideration than luxury or even business arrangements—a thorough cleansing of the city.

As regards the sewerage, I may here mention that I have seen a plan of underground sewerage, patented by Messrs. Martelli and Dr. L. L. Smith, most admirably adapted for this city. It certainly is expensive, but it could be carried out in a somewhat similar manner to that which they have adopted in Turin, namely, piece by piece, until the whole town could be drained. In this patent there is a vaulted

arch running through the town; this is divided into two chambers, a superior and inferior one—the former carries off the surface water, whilst the inferior one carries away the contents of the cesspits, &c., from the houses of the town, to be hereafter utilised. There are also further advantages not worth while entering into detail here, such as a means for doing away with the present unsightly telegraph posts, by having them running in the drains, &c. And there is a tramway on the roads for carriages which will save a mass of money in the friction to the macadamised masses.

Now, by this or other means of sewerage we can hope to get rid of two evils—the floods, which ruin so many thousands of pounds' worth of property yearly in our low-lying streets, and remove the contents of our cesspits, and, what is more, utilise them.

I hold that the first duty of the State is—regard to the public health. Let us look at the policy of Napoleon. His first action, nearly, has been to make healthy the city of Paris; and by his policy he has satisfied every one—a most difficult task. He gave employment to masses of the people by widening the streets, draining the same, pulling down all dilapidated buildings, small, ill-ventilated, and stinking hovels; and the result of this will inevitably be that

the health-roll of the city will so improve that thousands will resort there, and the State be benefited by the amount of saving from disease and loss of life, and the increase in the number of its visitors, and the consequent benefit to the revenue.

A sickly people is an inert people; and where the drones accumulate there is little honey. Now look at the shanties, hovels, and ill-built, ill-ventilated houses, around and inside this city; reeking with filth, overflowing cesspits, surrounded with decaying animal and vegetable matter. Take Little Bourke or Lonsdale streets, and their right-of-ways. The health officer's hands should be at work, either to pull these down, or at least to compel their inhabitants to follow out the rules enjoined; and if the latter will not do it, let it be done by the health officer, at the expense of the breaker of hygienic laws.

The strict enforcement of cleanliness is the duty of the State equally with the enforcement of the laws of morality—in fact, the one is intimately blended with the other; for wherever there is dirt there is crime and immorality. By the time this is printed and circulated, the hot weather will make its appearance. Now is the time for vigilance. Now is the opportunity afforded to the various corporate bodies of making insolvent the medical men of the colony. Let action be taken at once, without any red-tape

delays. Let our cry be, for the sake of our children,
“Cleanliness and Sewerage!”

Having said so much upon the sanatory prospects before us, let me draw the attention of the reader of these pages to the paramount duty which every one in this community owes to each other in the matter of the removal of local nuisances.

Fortunately, a reference to certain statistics of a practical character proves beyond any manner of doubt that the removal of a city's excreta, and the subsequent manipulation and disposal of it, can be effected without causing an increase to the ratepayers' perhaps already sufficiently well-taxed capacity to pay the little bill. In a country like Australia, where the soil is in general quickly exhausted of its fertility, and rendered by a few croppings so poor as to be unfit for cultivation, a vast field for absorbing the surplus refuse of our towns is open, waiting to receive that natural nourishment which the demand of the inhabitants has taken from it in the form of dairy and farm produce for many years.

Professor Liebig, the celebrated German chemist, has proved that, owing to a neglect of these necessary precautions, the downfall of great countries may be traced; but it is a singular feature in Liebig's writings upon the assistance chemistry affords to the agriculturist, he advocates a pure mineral theory only.

If, however, this great authority on such matters paid Victoria a visit, I would venture to affirm he would considerably moderate his views upon the state of our soil, which is already in too mineralised a condition, from the absence of a due percentage of humus or vegetable principle, which must be present in order to make a fertile soil, if we would succeed in farming and agricultural pursuits.

I think I have already shown the readers of this journal that we possess all the requisites for fixing the ammoniacal and other gases of our seething refuse matters, and thus at once arresting a principal source of sickness and disease. It has also been discovered that we possess extensive beds of a pure vegetable ligneous decayed matter, rich in potash and other fertilising ingredients of our earliest vegetation, sufficient in quantity to enrich the entire lands of the colony at a small outlay to the cultivators. Now in this we have cause to congratulate the farmers of Victoria, that they have within their reach the means of success, and even aggrandisement, if only they will follow the teachings of science and practice in applying to the soil the natural food taken from it, and thus not only enrich himself, but also the country at large.

The chemist, by analysis, discovers what particular substances are taken up as food by the plant, and

these will be found in the mineral matter contained in the ashes of the plant, the combustible or organic matter being represented by the chemical symbols or characters, C., H., O., N., in other words, carbon, hydrogen, oxygen, and nitrogen.

It is not my intention to enter into a chemical treatise upon the treatment of our lands, but simply to show those generally interested in the economy of daily life how wonderfully the all-seeing God of Nature provides for our wants and necessities, and more particularly in that of giving us food, if we will only overthrow that prejudice which unfortunately governs the toiling farmer more than any other class. It is indeed a painful reflection that, although chemistry teaches how abundance of the earth may be produced, ignorance and folly are daily robbing the land by a system of exhaustion, which will bring ruin wherever it is followed.

Intimately connected, therefore, with what I have already referred to as causes of disease and death, is that of utilising the waste matters which now disgust our sense of propriety; nor does it seem to me a very difficult matter to bring about such a desirable and important matter.

In the first place, we must undoubtedly deodorise and disinfect the excreta to be utilised. I have given, in former chapters on this part of the subject,

very substantial reasons why this first and necessary thing should be done, effectually and cheaply; and I have observed that it is most desirable that, to succeed best, a systematic mode of operations ought to be encouraged by our local health boards. But here, as in other things, there appears a want of unity of thought and purpose—or, in fact, an absence of a master-mind to direct the stragglers in the inquiry after truth and information, whether it be on noxious trades, or the constitution of our charitable institutions.

It is, however, exceedingly gratifying to find that whilst our Royal Commission, under the presidency of its chairman, is devoting much time to the discovery of smells, an enterprising firm in this city are as busily engaged in putting them down, *i.e.*, noxious gases; and so great has been the success which has invariably attended the trials—which, I am given to understand, are in all cases public ones—that public opinion unhesitatingly pronounces the preparation which I referred to as the “Chloro-Alkaline Deodoriser,” in some numbers back of the *Australian Journal*, as a new discovery in chemical science likely to be of great public utility. It has done more than I had predicted.

Here, then, we have one great difficulty removed, because one of the essential conditions to the success

of the utilising of nightsoil and other refuse before it is in a fit state to be used as manure, is that all noxious and poisonous matter be destroyed ; and this, chlorine, in the form of chloride of iron, effectually performs, without deterioration to the organic matter.

The more we go into a consideration of this question, the more convinced we feel that it is one of no little importance in its sanatorial as well as its commercial aspect. Modern statistics show that millions of pounds in money are annually allowed to run to waste by the improvidence of man, if we except the Chinese, who, in this thing, present an example of economy and usefulness which puts other nations to shame. With them, no doubt, it has long been a necessity, with so many millions of souls to provide with food raised upon their own soil.

In Germany, before the thirty years' war, the population was not smaller than it is at the present time. The agriculturists of that day pursuing the same "spoliation system" as the Americans and Australians do now, they produced quite as much carbon and nitrogen then, but took more time to do so, and scarcity was more severely felt, as they had not America, Hungary, or the great granary of South Russia to go to. What is now called "stall-feeding" was at that time entirely unknown. The meadow

supplied winter food for horses and cattle, and sheep ran loose, and fed in the woods and fallows.

These statistics go to show that, unless fertilising materials are given to the field or garden, it cannot be made more productive, and to let a field lie fallow on, makes the minerals more available for the roots, thus rendering the "spoliation system" more complete. Liebig calculates that "if a wheat crop takes 550 lbs. of mineral constituents from two and a half acres of soil 12 inches deep, and there is 100 times this amount, there will remain, after thirty years' cultivation, 18 tons of food fit for the use of plants."

Exhaustion of a soil inevitably happens when only one of all the minerals necessary for the nourishment of plants is wanting, which deprives the others of their activity.

If all the carbonic acid and ammonia dispersed through the atmosphere were collected in one stratum round the earth, a layer of carbonic acid would be a little more than eight feet high, and one of ammonia less than a quarter of an inch thick.

It may not be out of place, as showing how we change with the times, that in the last and seventeenth century the cultivation of the vine was flourishing in countless places in Germany, but owing to the "vignerons" neglecting to properly manure their land, the crops gradually decreased from year

to year, till they became so lessened in value as to cease to be profitable, the vineyards producing no manure; so they gradually died out, like a lamp wanting oil.

Ammonia is an element of food indispensable to plants, being a solvent of mineral matters, but it is useless to plants without mineral food. As my readers are now doubtless tired of this one subject, I terminate my observations, hoping that at least I have drawn attention to a most important matter to this young colony.

THE MELBOURNE CUP AND MELBOURNE LIFE.

THERE is no doubt but that the title here given will surprise many, but there is a great similitude in the two. "The race is not always to the swift," is so frequently proved in the case of the Cup, and longevity is not always to those who are *born* strong, that I feel it to be quite correct for me to compare Melbourne life to the Melbourne Cup. There are large numbers of us in this race of life who imagine we have a first-class chance of arriving at the goal of old age; but we find that we have made the pace too hot at the commencement, and we have not "wind enough" left at the end of the race to make a respectable finish. Let us take the comparison from the first.

I am afraid I must state that the youth of Melbourne and the colony do not have that amount of attention paid to them that the young thoroughbred has. Not that I mean to insinuate that the parents here are less fond or attentive to their children than in the old country; still, I must acknowledge that, with all our advantages of climate, cheap food, &c.,

the death calendar bears no favourable comparison with that of the latter. After many years' practice here, I cannot but think that our children pass from under our eye in the immense exhausting struggle for existence which rages amongst us go-ahead Victorians. The artificial pressure is too great, and the consequence is that we have no time to attend to our domestic affairs, and therefore to the detail which is necessary for the proper healthy rearing of our youth, both mentally and physically. It is perfectly true that the upper ten, who, vulgarly speaking, have "made their pile," can devote their attention to the careful raising of their young; but the shopkeeper, the professional man, the broker, the petty merchant —&c., what time have they to spare? Harassed fatigued, exhausted (all their mental and nervous energy having been put upon the stretch), when they get home, instead of being able to examine into the healthy rearing of their offspring, they are compelled to seek that repose which exhausted nature requires. Now, whether this be the cause or not, the fact is that very little regard in this colony is paid to the laws of hygiene; and the result is early death, or, at least, a weak, debilitated frame. Look at our colonial youth, and see if I am not correct. I have not here, of course, alluded to the fact that an exhausted parent cannot but beget a weakened offspring, as a

discussion of the subject is without the province of this journal.

Now mark the difference with regard to raising a yearling destined to run as a three-year-old and upwards for a Melbourne Cup. The first thing looked after is a healthy sire and dam, known to have certain well-recognised and requisite qualities, to imbue the offspring with the very properties necessary for the struggle which it will hereafter have to undergo. That being done, and the foal born, then every necessary precaution is taken to provide it with proper food. If the parent does not have a sufficiency of milk, this latter is provided for. When the time comes for separation from the mother (the weaning), the foal is taken from her, and a paddock, with suitable food and due regard to its healthiness of locality, is chosen, and every additional help in the shape of concentrated food is given to produce size and strength in the animal; and to this extent he is watched daily, with a view to the possibility of any hurt or injury being present, and if there is the slightest grounds for alarm, the evil is immediately attacked before it is allowed to progress.

Now, I would ask, is this the way we act with our children? do we really make great sacrifices for them to get the healthiest of localities? do we pay enough attention to the parent to see if her milk is sufficiently

nutritious for the development of the child? Nay, I would ask—and I speak now from a large professional experience—do we even pay attention to the food of the mother, to see if such is capable of producing a sufficiently nutritive food to rear our children? Might I not the rather say that the *laissez aller* style is that which suits us the better, and *laissez aller* consequently is the condition of health of our children.

The foal having arrived at nearly two years old, as a consequence of his careful feeding and growth, great care is taken to keep in check any foolish gambolling and straying, by which he might injure himself; but, on the contrary, he is taken up, and carefully inducted and broken in to adapt him to the future labours he has to undergo, and every conceivable precaution is taken that he does not, at this period, acquire a single bad habit.

I would respectfully ask you, gentle reader (if you have not the hirsute appendage), can you conscientiously state that you have attentively looked after your children, and watched carefully that they have not contracted some bad habit? Have you so guardedly watched them daily to see if they have not injured themselves? and, if so, have you at once applied to the proper authorities to get these injuries remedied? Have you watched attentively that they

have not strayed? Remember, in the one case, the horse-trainer is going for one prize, the Melbourne Cup race; but your child is going for the larger race—the race of life; and to enable him to succeed, to win his prize, and arrive at his goal, he must have equally careful training, and every help as regards his paddock (his food), his locality, changes of healthy air, and his moral and physical training. And, lastly, do you watch whether there is any gambolling and straying likely to injure the maturing youngster? Parents, I call upon you carefully to watch your children as they are getting into adolescence; see if there are any changes in them—if they are becoming weaker, paler, easily exhausted, and with all the appearance of consumption on them. If such is the case, watch them with Argus eyes, and imitate the trainer—*find out the habit*, and take instantaneous steps to break them of it. And if they have advanced a little further in age, watch their straying, prevent them doing so by making the home more pleasant; and to make it pleasant you must make it healthy. Exercise all your skill and ingenuity to concentrate your forces at home, and to this end I would exhort you, the mothers of Victoria, to exercise your pleasing arts and powers; gather around you all that is like yourselves, virtuous and

pure. Never mind so much if you cannot dress as well as your neighbour; remember

“She’s adorned

Amplly that in her husband’s eye looks lovely—

The truest mirror that an honest wife

Can see her beauty in.”

Expend a few shillings on pleasing games; wear your cheerful countenance at home, and *give all your bad humour vent outside the house*, and make it so pleasing and cheerful that your children will look upon their home as their chief attraction, and you as their guide and trainer, from whom they are to obtain all those qualities which are to render them fit to enter into the race for which they are shortly about to compete. Let the son feel all the influence of womanhood. Who is there amongst us who has not at one time or other felt the high toning power and influence of a well-cultivated, home-loving, virtuous mother?

“Happy he

With such a mother! Faith in womankind

Beats with his blood; and trust in all things high

Comes easy to him; and though he trip and fall,

He shall not blind his soul with clay.”

I am induced to write these lines because, on my tours, both professional and otherwise, on entering any of the places of amusement, often of the lowest

type, I see our youth, the future manhood of Victoria, hopelessly drifting down the stream of dissipation; smoking and drinking, and otherwise sapping the very foundations of their lives, and calling *too early* on their powers; and I cannot help saying that this in most instances is not so much the fault of the youth sitting in front of me, as the faulty training, caused most frequently by the home being rendered unattractive. And mentally I say: Young man, you are not training rightly for the race of life; you must exercise yourself for the duty you are about to perform, and if you do not, you cannot expect to win the race, except by a fluke, and flukes are poor things to depend on in the race of life or the Melbourne Cup. It is true that every horse is not born speedy, as every man or woman is not born clever; but if the horse is reared strong and vigorous, and trained well for the purpose required, if he does not win a Melbourne Cup, he has a most excellent chance of pulling off one of the minor races, and by his owner being confident in his horse's power, he can make a fair certainty of it, and pull off as much money as he could by the Cup, but without one-half the risk. So it is with our two-legged friend. If he is carefully trained, if he eschews tobacco and spirits, and does not encroach on the hours required for rest, if he will exercise himself in the open air, learn to swim,

play cricket, use the gloves, enter into and take a delight in gymnastics—if he will remember that the pride of a young man is his strength—if he will, in like manner, while he trains his muscles and develops them, also remember that a well-stored brain will stand him well in the race of life—if he will do this, he may depend, that, although it is not his lot to win the Cup, it is impossible for him to be amongst the “duffers,” he can’t be “distanced,” and he must be well up at the end of the race.

ON TEETHING.

THERE are many ladies who have cut their wisdom teeth, yet know little of how their children suffer, or how many are lost in this colony through ignorance in respect to the "cutting of teeth" of their children. It is my intention, therefore, to devote this article to the elucidation of this subject; and in doing so, I shall remove a few errors entertained both by medical men and the laity.

Infants have in each jaw, in their first set of teeth, four central teeth, with chisel-shaped tops, called incisors; two dog- or eye-teeth, called canines; and four grinders, or, as they are technically called, molars. Now these teeth come somewhat after this style. Those of the lower jaw make their first appearance in the shape of the two middle incisors, or cutting-teeth; then the two lateral begin to show, one on each side; then, as a rule, the first molars. The upper jaw shows in succession.

In order that a mother should thoroughly understand how so much disturbance occurs in the health and system of her child at this period, I may as well show her what is going on in the foetus or unborn

child; and I shall do away here with all jargon, and speak as plainly as it is possible. When a foetus is examined at the age of about three months, the teeth are found to be a membranous sac; at the bottom of the latter there is a small pulp, which, viewed with the microscope, shows nervous and highly organised tissue. On the top of this pulp, bony matter becomes visible. Afterwards, the enamel is formed; the groove of the lower jaw then has partitions springing up between these sacs—these turn into bone with the jaw itself, and form what we know as “the sockets” of the teeth.

Now, my lady matron reader will perceive that two things must occur at the birth, when bony matter and the tooth itself is forming. Above this sac is the gum, and beneath is the nervous matter. The tooth, about the fifth or sixth month—earlier or later—after birth, wishes to make its way out of the jaw and get cut. Yes, but there is the gum above and the nervous matter below. Now, in making its way out, it presses very severely on the gum; this gives a great deal of irritation, and often inflammation, to the mouth, and the child's system suffers from this irritation by sympathetic action with other organs of the body. Now, if the tooth can press upwards through the gum, it will also press downwards; and what is the consequence? Why, it

presses on the nervous matter; and you know that this must give great pain, and will communicate with the brain and the nervous system generally. Can you be astonished then that your child is irritable, moans, suffers from fever, &c., during this teething process? But more of this hereafter. Supposing that the process goes on healthily, the result is as follows:—The tooth, pressing upwards upon the gum, causes the absorption of it; and by its absorption, and growth of the tooth, the latter makes its appearance at the surface, and gradually grows upwards, showing “the pretty little pearl,” and the child has then, in our parlance, “cut its teeth.”

Now, though this mode is the natural one, and everything has gone on favourably, still certain things must have occurred, such as determination of blood to the part, increased flow of water in the mouth, and red, swollen, and hard gums; this irritation will always cause more or less fever—as shown by thirst—and the child sucks the breast more frequently, becomes peevish; if it goes to sleep, it starts up, or jerks its body; there will be a pulsation in the head, and there will be evidence that the bowels and digestive organs are disturbed by diarrhœa—green, slimy motions, smelling more or less offensively. Now if these latter symptoms occur without reddening of the gums, &c., you can put it

down that there is merely the process of ossification going on, and no lancing of the gums will do any good; but if you see that the child has hard, swelling gums, then you know positively that there is a strong effort being made to overcome the resistance of the gum, and the sooner you help Nature by lancing down to the hard bony mass pressing upwards, the better for you, and the more you show common sense and humanity.

Mothers, I know, fear this lancing; and instances are quoted where the tooth did not appear immediately after the operation; but this tells nothing. Look at the immense relief you give the child, and the really—if quickly done—painless operation. Look at the cause of the pain—the tooth trying to relieve itself from the gum—and say, can you for a moment hesitate in either lancing it yourself, *down to the tooth*, or else getting a medical man to do so. I have seen the most painful convulsions, tremors, &c., removed, as if by magic, through the lancet being freely applied. But I would warn all parents from too hastily rushing to the conclusion that “it’s the teeth,” when their children at the teething age are attacked with any of the above symptoms, for many grievous errors may thus arise, and an important disease may be overlooked till it has assumed serious and, perhaps, fatal forms. The best way for

a medical or lay man to do, whenever these symptoms arise, is to look at the gums; and if they are hard and swollen, then he knows the evil is there, and can be speedily remedied; on the contrary, if these do not exist, then let him look elsewhere for the cause. Again, it may be that there is a complication of disease, connected more or less with the teething, and then good attention to both will save the little sufferer.

There are several rules which I have attempted to lay down here. I may say I was for years a senior visitor to a large maternity charity in England, and my opinion ought to have some weight in children's diseases. I will, of course, here condense my remarks.

The quicker the teeth are developed, the more disturbance of the system will take place, and local irritation be set up. The earlier the teeth grow, the more severe will be the symptoms, probably because the child is less able to bear the pain and the shock; and besides, the nervous system, so to speak, is not altogether settled down, and there is a stronger determination of blood to the gums—and therefore to the head—than is natural, and we get sympathy with all the other organs. The robust children suffer least, the more delicate suffer most. If there is any difference in the size of the jaw with

that of the teeth, then, of course, the suffering will be in a proportionate rate.

I find that this subject will take up more than the limit allowed me for one number, and therefore I will put off what further I have to say to the next month's serial.

Having, in my last, shown of how immense importance to the child is the physician's and the parents' knowledge of the serious effects accruing to the little patient during the growth of the teeth, I only deem it right that I should inform them at what times the different stages of dentition occur.

The first evidence of their appearance after birth is about the sixth, seventh, or eighth month. This, of course, varies. One of my own children, like Richard the Third, was born with two front teeth. Therefore if about this time the child becomes peevish, fretful, and feverish, it is as well to examine the gums, and see if they are swollen and red.

The first teeth which appear, as a rule, are the middle incisors, or cutting teeth, of the lower jaw; then the similar two of the upper. About a month after, we get the lateral or side incisors, one on each side of the central, of each jaw; then, about a month afterwards, we have the first molars of the lower, and, directly after, those of the upper jaw show themselves. Next come the dogs' teeth, or eye, or

canine teeth, as they are termed, and then we get the second molars. Thus, you may put it down on an average that the child will be distressed about these months—the middle cutting teeth at about the sixth month, the lateral ones about the eighth month, the canines about the fifteenth month, and the second molars about the twenty-fourth month or so.

Irrespective, then, of the above symptoms, if, in addition, there is feverishness on or about these periods, the bowels loose, the head hot, the eyes dull, water running from the mouth, the appetite lost, if there are frequent purgings and gripings, if the head shows implications, if the child is convulsed, and there is really no sign about these times of anything to cause it, though there be no great redness and swelling, I say at once cut down with the gum-lancet, or any other available instrument, right to the top of the tooth. I have seen and been frequently called to paralytic children, when “the doctor has given them up,” and have recovered the child like magic, by placing it in a hot bath and cutting right down say till the lancet grated on the tooth underneath.

I have now said all I have to say in regard to the growth of the temporary or milk teeth of the infant. I now come to the history of the permanent set of teeth. These are situated in little bony cavities in

the jaw, under the milk teeth, ready, like little sentinels, to pop up when wanted.

About the commencement of the third year, the jaw bones commence to elongate, and in about two years after, the permanent teeth begin to make their appearance; and about this time you notice a change in the features of your little pet. It is that change which goes on continually altering the features till he arrives at manhood. A change is due to the want of increased space for these permanent teeth. Even the very jaw-bone attached to the jaw is changed from being oblique to a nearly perpendicular line, through the room required for the molars.

The second teething develops itself about the sixth year, and goes on for about eight years, when all are completed except the wisdom teeth, which are generally cut about the age of twenty-one. I allude to the teeth, not our wisdom; but even the former are sometimes not cut till the thirtieth year, and frequently much later.

Let us generalise:

First molars, between 6 and 7 years from birth.

Central incisors, 7 years.

Lateral incisors, 8 years.

First and second bicuspid, 9 and 10 years.

Eye teeth, 11 and 12 years.

Second molars, 12 and 13 years.

Third molars, 20 years.

I might add that the fifth year is about the time when the milk teeth are beginning to be shed, and the way they disappear is through the under part, or fangs, becoming absorbed. It is at this time that great care and watchfulness must be exercised by the parent and dentist, or medical attendant, because the irregularity of the teeth will cause a corresponding condition of the jaw; and one tooth pressing irregularly and unduly on the other, will cause great and early decay, irrespective of its unsightliness. One has only to consider that the "temporary" teeth are increased by eight additional ones, when "permanent," and one may clearly see that there must be a great change in the jaw.

There are certain persons, however, who are gluttons in the shape of teeth-cutting, and they will have a third set, varying at from the sixty-third to the eighty-fifth year; but it is quite unnecessary for me to enlarge upon that, although childishness is my subject.

The teeth in horses and other animals are an index of their age, and it has been sought to tell the age of us bipeds in the same way, but I think I may honestly state that no one can arrive at anything like a really satisfactory and reliable conclusion on that head.

Now, with respect to dentition, a large number

of deaths are recorded, and diseases attributed to teething, which really never should be laid to its charge, simply because they occur at the dentition-period. If a child is ill about this period, the first thing the parent or medical man should do would be to fly to its mouth, examine the gums well, and see if there are any of the symptoms previously detailed, such as swelling of the gums, increased flow of saliva, &c. The quicker the teeth are shed, and the larger the number, the greater the irritation. It will be as well to observe that most symptoms of dentition show complications of the nervous system; but these complications, if properly directed, show naturally the means of getting rid of the danger; as, for instance, in the diarrhoea sometimes accompanying dentition, and in the case of the flow of saliva. I have known many deaths to occur merely through the interference of the medical man trying to stop suddenly this laxity of the bowels. The parents' or physician's duty is to at once regulate the intestines by a soothing easy dietary and medicines. I do not, however, here wish to enter into this subject, as I have given to my readers a fair knowledge of the method of dentition, the effects of the process, the complications arising therefrom, and the causes of such changes; and I have shown the treatment to be observed, chiefly dwelling on the necessity of

thoroughly and effectually lancing clean down to the tooth itself; and having thus as clearly as possible shown all that is necessary, in a popular way, I refrain from further remarks, merely stating that in the ensuing year I shall, for the benefit of the mothers of Australia, give in successive numbers the various diseases incidental to the children of this colony, their symptoms, causes, and treatment.

CONCERNING THE "RAISING" OF YOUNG AUSTRALIANS.

(Dedicated to the Mothers of Australasia.)

[THIS being the second number of the year, it is thought by the proprietary, that, as I have now contributed to such a large number of the serials, it would have more weight were I to publish my name in connection with the articles I write, in lieu of that *nom de plume* I have hitherto adopted, viz., "Colonial Lancet." In deference to their wish, after contributing for nearly eighteen months under the above name, I append my own to the articles for the future.]

WHY MOTHERS DO NOT SUCKLE THEIR OWN CHILDREN?

Whether it is that modern luxuriousness has crept into our young colony, and that we are attempting to ape the over-refinement of the mother country, or whether it is on account of the heat of the climate, and its consequent enervating influences on the wives of our more wealthy colonists, it is nevertheless a

fact that the hiring out of wet-nurses is becoming more prevalent—I was going to say, fashionable; and strange to say, my observations show me that the wealthier classes are raising healthy offspring; whilst, on the other hand, the poorer classes have more sickly children. The reason is obvious: Mrs.—, who rides in her carriage when she goes out, who takes no exercise, who, in a warm climate like we have here, “sustains her strength” with “a little porter” and “a glass of wine” three or four times a day; who stays up late o’ nights, and lives on a rich, highly-nutritious food, becomes enervated, has a lassitude creeping over her; the slightest exertion overcomes her; she is dull and heavy, and inclined for sleeping during the major part of the day; whilst as evening approaches she becomes livelier, and is ready for the ball or evening party, theatre, concert, &c.; but as soon as these are over, she returns to her listlessness and weariness. This lady, I say, is unable to suckle her child; if she does, the child sickens, and the mother becomes thoroughly exhausted. How can she, poor thing, without exercise, with an over-stimulated system, expect to secrete a healthy fluid? The blood flows through her veins too sluggishly, the organs of secretion are apathetic, and when they secrete, the raw material they have to manufacture into lacteal fluid is of such a character, that, not

obtaining the proper elements, the compound result is deficient of the properties required to build up the frame of the infant. Nay, more, it is of such a character as to irritate the digestive apparatus of the child—producing a big, hollow, hard belly, thin face, and emaciated frame. Wealthy mothers, therefore, have here habituated themselves to the idea that “they are too weak to suckle their children;” or else they state that “the climate is too much for them;” and the mother delegates the care of her child to a wet-nurse. This latter, in many cases, is indiscriminately selected from a crowd at the Lying-in Hospital, frequently without the slightest regard to her previous habits of life. Certainly, sometimes an inquiry is made as to whether she is then healthy; and as long as she, for the time being (when chosen), *appears* healthy, she is entrusted with the child.

Let me ask all the conscientious matrons of these colonies this question: Have you pondered for a moment on the effects of the introduction of the milk into the body of your child? Do you know that it is from this very milk that the frame of your infant—the future man—is to be formed, and that, therefore, if that nurse has a scrofulous habit, if she has been troubled with a vile disease, and that this has not been thoroughly and effectually eradicated, the system of your child, the offspring of your body,

will become contaminated, and that every tissue of its frame will be impregnated with the disease—latent, perhaps—of the nurse from whose fount the child gets its nutriment?

Oh! mothers of Australia, ponder a moment on the above. Think for a few minutes of the future! Ask yourselves the question: When my child comes to years of discretion will he not think of me, perhaps, with feelings which I as a parent would shrink from? If in after years this latent poison in his system makes itself patent in some hideous form, will he, not knowing the circumstances of the case, think of me with feelings such as I would be horrified with?

My lady readers will, I trust, pardon me for pointing this out to them; and perhaps I am not justified, in a journal devoted to general reading such as this is, to hold the mirror so truthfully up to nature; but as these occur to me so frequently in my consulting-room, I think it my duty to raise a warning hand against this indiscriminate system of wet-nursing, especially among those who, I know, can, with a little exertion, a little effort of will, throw off this terrible incubus, this wearying lassitude, and by exercise in the open air, a bold will, abstinence from stimulants, cold bathing, a little exposure to the winds of heaven, and absenting themselves from all places of amusement which keep them from their beds till

late at night or early in the morning, and which, from bad ventilation, increase the lassitude, may easily get a vigorous system of body. Those who wish to recover from this weakness should read my past articles on How to get Condition, under the heading of "Pedestrianism," in last year's issues.

I am fully aware that there are many ladies who cannot suckle their own children at their breast, and who must employ the wet-nurse; and to these the above remarks do not apply; and to these I say, make every possible inquiry as to the antecedents of your nurse—her past life; and it will be always as well to let your medical man have a five minutes' chat with her. The medical attendant can often obtain a much truer history than the mother; and besides, his discriminating eye will soon detect whether there are any of the usual symptoms attendant on any latent disease, which obviously must be overlooked by the guileless mother. Take, for instance, scrofula: the bearers of this disease, immediately after the birth of the child, present quite a healthy appearance.

But, says my reader, you state that the wealthier classes, as a rule, rear healthy children, through having wet nurses. So I still say, and my remarks, as above, relate to that which only shows itself frequently in after life, when the child is growing to

adult age. Let us, however, look on the opposite side in a statesman's or a social point of view, and I ask my readers to pause and consider well what is the effect of this wet nursing—why, that the mother (I allude to the nurse) is tempted to leave her own offspring to suckle that of a stranger; the latter, through the means of her money, causes her infant to be nourished at the expense and life of another; for most surely, in this colony, with few exceptions, does that child die which is dry nursed, or “spoon fed.” The State thus sustains a great loss, and society is outraged.

I think, after what I have here advanced, that it is quite unnecessary for me to dilate further on the necessity, morally, physically, and legally, of mothers nursing their own children. I have not brought forward the most powerful claim—that is, Nature's own ties; neither have I, in this place, upbraided mothers with their unnatural desertion of their infants, be they lady or nurse, inasmuch as, in the latter case, pecuniary difficulties necessitate it in most cases, and in the former, *unavoidable* ill health and debility likewise necessitates it; nay, sometimes, in the latter case, it would be highly reprehensible for a mother to give the breast to the child, as, for instance, she may labour under consumption, “king's evil,” or scrofula, and other diseases, which would entail upon

the child most serious results, and on the mother most disastrous consequences.

All things, however, being equal, let it be distinctly understood that the mother's breast is the proper and *only* diet that should be given to the early infant, and, of course, in place of that, where the mother, from disease, cannot nourish the child from her own breast, it should be nurtured from that of a healthy, vigorous woman; and in all cases of the latter, before she is engaged, she should be recommended by the medical attendant.

Of the manner of rearing children from the birth, where neither mother or nurse can give the breast, and the after diet, I shall dwell more particularly in my next.

Before proceeding to remark upon the manner of rearing children where the mother and nurse are incapable of giving the breast, I think it will be as well to dispel one or two errors that mothers fall into respecting the feeding of the nurse who is giving suck to the infant.

Many suppose that the more you feed the nurse, the better will the milk be; but let me at once give a warning to the over-solicitous mother in regard to this practice. I have seen many children brought to me who have shown all the symptoms of emaciation and swelled abdomen, resembling every way the ill-

fed, "dry-nursed" child; and on inquiry, I have been told that the nurse has been copiously fed, her stomach overloaded, her nervous system strung up by a too stimulating diet; or I have found the mother so careful of her child that, having a little knowledge, which, we learn, is "a dangerous thing," she has kept her nurse on a rigorous, unchanged diet, and the milk has been thereby much deteriorated. Now, in regard to the nurse with an over-fed and stimulated diet, I can only say that she becomes feverish, her secretions are vitiated, and the milk, in like manner, is thus unfitted for the delicate infant's stomach; nay, it is actually semi-poisonous in its nature, and the mucous membrane (the lining of the stomach) demonstrates this by rejecting the "hard, curdy matter," by frequent acts of vomiting. I have even been called in to cases where, from the mere sudden burst of passion in the nurse, the child has been thrown into violent convulsions from the totally changed and poisonous character of the milk. I illustrate this latter simply to show that, if so slight a thing as an irritability of temper will produce this change in the milk, and consequently on the infant's stomach, how much more must that child's digestive organs be attacked by an artificially stimulated secretion from the breast of the over-fed and over-porter-stimulated nurse?

When will mothers use their common sense in this matter? When will they pay attention to, and take their laws from, Nature? It is true that where a mother or nurse is suckling she wants nourishment, in order to produce good, nutritious milk; but, provided she is in health, and has a good mixed diet, and a sufficiency of it, that is all which is required to render her milk secretion wholesome and nutritious; and, combined with this, there must be plenty of out-of-door exercise, and some amount of recreation, to keep the mind in an equable condition.

DRY NURSING.

Now, as I stated in my last, it sometimes happens that it is necessary to "dry nurse" the child. Well, I know of nothing so calculated to certainly destroy an infant as this latter process, and few—very few—survive this treatment. I know that it will be objected that there are some spoon-fed children who are raised, but I cannot but point out here how statistics show the few who survive this kind of rearing, and the terrible suffering the majority of little innocents exhibit who undergo this kind of feeding. Now, I would give a practical illustration to show how necessary it is for extreme care to be used in feeding children. If, for instance, you have, by inattention or otherwise, produced an irritable condition

of the child's stomach, and you then introduce in that organ any food which cannot be digested, it remains there, and, like any other putrefying substance, it will throw off a gas, and distend the abdominal walls, giving great pain, as exhibited by the pitiful moans of the child; great irritation is set up; the stomach and bowels try to get rid of their contents, and, to protect themselves, throw out a large quantity of mucus; diarrhoea sets in; a glairy, offensive matter (the mucus) is discharged; the bile is no longer secreted by the liver, rendering the discharges still more offensive; the child becomes weaker and weaker and more emaciated, and a disease, known as mesenteritis, sets in, and death ensues; and it is practical and plain enough to the common-sense mind, the undigested piece of food has remained in a warm bag (the stomach), where there are warm fluids being secreted; the food obeys the laws of all organic matters in a warm, moist place—it putrefies, and it not only gives out gases, like any other putrefying substances, but it generates a large amount of putrid acid matter, and this, in addition to the above, keeps up the irritation.

ARTIFICIAL AND HUMAN MILK.

Which is the food, then, to be given to an infant? Why, naturally, that which approaches nearest to the

mother's milk, and that is cow's, or rather asses' milk, diluted with water, and the former with a little sugar. As asses' milk is most difficult to obtain, I will give a formula in cows' milk which will approximate as near as possible to the mother's milk, and that is—two parts cows' milk, one part weak barley water strained through a fine sieve, and a little sugar to sweeten it.

But of all the milks of animals, by far the best is asses' milk; and so much was I, and have I been, impressed, not only through my own observations, but with those of others, that I determined to collect a number of female asses and breed from them. This I have done, and I now have, in one of my paddocks, no less than ten thorough-bred female asses, several with their pretty little foals at foot; but whether it is the expense, and that parents prefer their money to the lives of their children, or whether it is prejudice against asses, I know not; still, one thing is certain—the female asses remain in my paddock, and their young enjoy the benefit of the excess of beautiful rich milk. One satisfaction, however, remains, that the Parisians, if their reporters are to be believed, have discovered that, in the eating, asses' flesh is the most delicious of all animals, so that I may anticipate “a ragout à la ane” shortly to be served at my table. I know this will

cause a retort from some cynic, who will exclaim, "What a cannibal that L. L. is, to swallow one of his own brethren!"

From asses' flesh let me return to my mutton. My reason for preferring asses' milk is, that it is more easy of digestion than cows' milk, that it is richer, and can therefore bear more dilution, and, you can depend upon it better than the former; and, lastly, chemically, it is more allied to the human mother's milk than that of any other animal. And now, how is this to be exhibited properly to the child? Mixed, as I have mentioned above, it should be given through the agency of a feeding-bottle. And here, I am reminded, I ought to say one or two words respecting those articles, of the greatest importance to the dry nurse.

BOTTLE FEEDING.

It frequently happens that the child's stomach is deranged through the carelessness of mother or nurse, who intrust the feeding of the child, by agency of the bottle, to an under-nurse, usually a little girl. She, poor playful thing, is intrusted with a perambulator, the child, and the feeding bottle. The child has its drink before starting: the bottle is then placed, perfectly exposed, in the little carriage. Perhaps the saliva from the child has passed to the

milk, and turns it ; perhaps by the previous heating of the fluid, or, it may be, the latter is “turned” by the exposure. It becomes sour and cold. The child, after being out some little time, wakes up, begins to cry. This cold, acid milk, is taken into the child’s stomach, and mamma is astonished if, that night, her child is, without any apparent cause, attacked with convulsions, or cries, is irritable, and won’t sleep. Again, another evil from want of attention, but which my practice with children’s ailments has brought me to discover, is this : the nurse frequently, in the hurry of the moment, or for sheer laziness, will give the child a drink out of a nearly empty bottle, where, perhaps, there is not more than a tablespoonful. The consequence is, the child, in two or three draughts, absorbs this with a lot of wind, and then sucks in a stomachful of cold wind. Again, another source of great evil is this : the nurse is careless, and omits to thoroughly wash the bottle with hot and cold water. A portion of the previous day’s milk remains, and no sooner has the girl gone out with the child and bottle than, from this very cause, the milk is turned sour, and is imbibed by the child, the watchful eye of the mother not being there to control it. Now, how remedy this ? I hope I shall be pardoned if I have digressed and gone too much into detail ; but I know that there are so many in this

colony who cannot rear their children, and there is so great a prejudice to wet nurses, that I am conscious these attentions to details may be the saving of very many lives.

In the first place, then, I would recommend mothers to have two feeding-bottles—one always to be first washed in hot, and then to be kept in cold water, till required. This would keep it continually sweet, and, when wanted, ready for use; and the other can then be at once put into condition to receive the next milk, and the child will not be kept waiting. When the milk is in, and the perambulator ready to go out, let the bottle be wrapped in two or three layers of flannel, to keep it of an equal temperature. How can you expect your child to be healthy if you give it warm at one moment and then dead-cold the next? Lastly, it would not hurt if the mother scraped a very little chalk occasionally into the milk.

I wish here, *en passant*, to state that mothers and nurses should remember that the little girls they send out with their babies in perambulators are not little women; that it is implanted in the nature of children to play and to be forgetful, and that, therefore, THEY WILL PLAY. I have known some of the most frightful accidents to occur from this very cause, especially with the bottle. I have known the

bottle to be thrust right into the mouth of the child, creating frightful distortion. Another case occurred, only a few days since, in which the little girl in charge ran a race with the perambulator, which, coming against an obstruction, overturned, causing the bottle, which was lying by the child, to be smashed to pieces, and the poor little child had its face so cut in every part that it was dead before even the particles could be wholly extracted from its poor little face. The number of accidents resulting from so many similar causes which have really concerned me so much, though it is not within the province of the question of "raising" which I have taken up, is my only apology for introducing the matter here.

CONDITION OF NURSE-SUCKLING.

It may be as well to make the mother acquainted with the various stages, as generally developed, through which her infant will pass if she pays no attention to the condition of the nurse suckling her child, with whom the milk disagrees, either through a diseased or impoverished condition of the former.

The milk, then, can derange the digestive organs of the infant from, as above stated, either a diseased or impoverished condition of the nurse. This fact

being established, let us glance first at the symptoms which show themselves from bad suckling, in contradistinction to those from weaning; to which latter we shall shortly pay due consideration. And I would ask the mother to notice well the commencement of these symptoms, so that she may, at the onset of the disease, nip it in the bud, before it advances too far, and the child dies.

An infant, suckled when the milk in any way disagrees, shows a "softness" and flabbiness of flesh, when the skin looks very pale and bloodless; it often shows a puckered skin, which latter hangs about it; it becomes thin and slightly "pinched" in the face; it is peevish and fretful, and always seems to be wanting to suck; it becomes restless until it sees the breast, and then, as if troubled with a terrible thirst, draws so hard, that often the mother or nurse will cry out. No sooner has the little thing swallowed the milk, than it throws it up again and again; but ultimately the mass comes up, not fluid, but a thick, hard, white curd, which smells very acid. The child is then taken with a diarrhoea; the motions are greenish; and often curdled milk, as it were, passes from them. The child continually wails, moans, and cries. The little face, formerly so plump and pleasing to the mother's eye, becomes emaciated, wrinkled; continuous purging sets in, and in less

than a month the child dies, and this through inattention of the mother to the rules laid down in the choice of a nurse and her food (as given in my last), or through want of proper attention to her own breasts and condition of health, as shown in Chap. I.

Now the cause of this is obvious. Either the milk is diseased, or it is not sufficiently nutritious for the infant, and the stomach of the latter becomes irritated. And when you consider how delicate the mucous, or lining membrane of an infant's stomach is, it will no longer astonish you that the smallest irritant applied to such a membrane would cause great and important changes to take place; firstly, of an irritant nature, thus compelling, for its own security's sake, the getting speedily rid of the cause, as is exhibited in the throwing off, by vomiting and purging, of the irritating matter; and secondly, by so changing the membrane, by softening, &c., as to prevent its performing its functions, and the child thus dies literally of starvation; and in the majority of cases this latter is the result, sooner than that of inflammation.

Now, what is the first duty of the mother, or the physician, in a case of this kind? I think it hardly necessary to point it out here, it is so obvious. The first duty to be performed here is to at once change the nurse; never mind the expense and inconvenience

incurred, your saving will be in the end, for you will save it in physicians' fees, in chemists' bills; and you will do more than that—you will save your infant's life, which, in ten cases out of twelve, you will never do through your two former, namely, the doctor and "doctors' shops." If ever an illustration were needed as regards "throw physic to the dogs," you have it exemplified here. Use your common sense, Oh mothers of Australasia! Return to the first laws; follow up nature, and let her laws be your guide. I cry not down here the physician or his art. If you wish to save that child, which to you is more precious than your own life, don't trust to medicine; don't let conflicting theories be set to work on your child, but use your good, innate, common sense; YOU KNOW THE CAUSE, AND YOU HAVE THE REMEDY. Change your nurse, and, if possible, the room, or even dwelling; but, by all means, change the nurse. If you are not able to do that, then remember what I previously wrote of ASSES' MILK, with a little scraped chalk and water, or in the event of asses' milk not being obtainable, take cow's milk with water, &c., as given in my previous chapter. By all means, however, avoid giving medicines, which will be either prescribed in the shape of powerful astringents or purgatives.

WEANING.

And now, as regards this latter, it must be borne in mind that the stomach of an infant differs from that of one of greater maturity; for, in the one instance, it resembles more that of flesh-eating animals, which is the simplest form of stomach—West says: “It is long, but little curved, growing narrower towards either end, where it passes into the œsophagus (or throat opening) on the one hand, and into the intestine on the other.” And he then goes on to show the anatomical difference between the infant’s and that of the adult.

The stomach, then of the infant, it will be clearly seen, is unfitted, anatomically, for solid food, or in fact for any other than milk diet; for this latter is quickly absorbed, and not therefore retained; whilst as the child gets older the stomach in like way adapts itself to that of an organ which has to retain food for a more or less time before digestion can set in; and I might here, also, cursorily remark that the intestines in like manner, as they develop themselves, alter for the purpose of retaining the more solid material.

Now, it must be obvious, therefore, to any one, that in the weaning of children—which should commence about the seventh to the ninth month—that

as solid matter in a substance for food is that which is the most difficultly digested, so that food which has the solid matters the more readily held in solution will be the best digested. Therefore do I once more show the necessity of parents and physicians in this country, where digestive derangements are so frequent, giving to the infants who are to be weaned THE MILK OF ASSES.

I stated in my last that I had purposely bred asses, and kept them for that purpose; and that I have a number of them at present in my paddocks, to let out or sell, for that very purpose. By this very mail I have an analysis "On the chemical nature of Whey and Milk," by Herman Lebert, Professor of Chemical Medicine in the University of Breslau, who says—"If we compare different kinds of milk, with reference to their solid constituents, we find that asses' milk is most dilute, containing scarcely 9 per cent. solid matter; next stands human milk, with somewhat over 11 per cent.; next stands goat's milk, with $13\frac{1}{2}$ per cent; next cow's milk, with over 14 per cent.; then sheep's milk, with 16 per cent. (according to an analysis made in my laboratory, even as high as 18 per cent.); and, lastly, mare's milk, containing 17 per cent. From these facts, asses' milk would be applicable in cases where a dilute milk is desirable." Now, in all cases

of weaning, especially where there is the slightest tendency to irritation of the digestive organs of the child, asses' milk should be given. But, I would still further say, if it is a common-sense idea to have a gradual approach to solid food, would it not, in all cases, be a more rational, irrespective of a scientific, plan to commence always, and in all cases, with asses' milk, containing the least quantity of solid material, and gradually work up to cow's milk. I am sure it would be the saving of a large percentage of life, besides the saving of many foundations of dyspeptic complaints in after years. Now, another matter that analysis teaches us, is, that butter and cheese are less in asses' milk. Well, we all know that nothing disagrees even with the adult stomach more than these; how then must it be with delicate infants. Next to asses' comes human milk, next to that comes the cows'. Asses' contains 2 per cent. only, human 4 per cent., cows' 5 per cent., goats' $5\frac{2}{3}$, and sheep $5\frac{1}{3}$.

But now we come to a great consideration. "The milk-sugar amounts, on the average, to 4 per cent. in the cow, goat, and sheep, and to more than 5 per cent. in the ass." Now, as milk-sugar is that which is the easiest digested, and the material from which fat is formed and other nutrient matters required for the plumpness of the infant, it naturally suggests

itself that here most likely is the cause why this asses' milk is that which, in all ages, has been instinctively looked upon (before science had developed the fact) as being the food the readiest assimilated, and that on which the child throve best.

Now, as regards the general diet of the child after the commencement of the weaning. Say the child is desired to be weaned: firstly, in conjunction with the nurse's milk, you give a little asses' milk; then gradually get to cow's milk, and a little bread soaked with it. In the future food and rearing of the child, it will be necessary to look to its constitution, the habits of the parents, their residence—in the country or city—and the general surroundings of the child; my opinion being that much injury is done through the want of proper regard to this matter, and the indiscriminate manner of treating children all alike. In my next I shall refer more particularly to this matter, and give a few interesting hints to the mother; data from which she will be able to treat her own child, and ground that treatment on principles consonant with common sense and the laws of science.

There cannot be the slightest doubt in the minds of the matrons of Australia that many hundreds of the children of their towns die at this period of their life (the first year) from the cause mentioned in my

last, but more particularly will my lady readers state that they have known the mother, by her gross ignorance, to kill her child equally as surely as if she had administered doses of a poisonous substance. Others will say that they remember distinctly how some little pet, with rosy cheeks, plump, and fat, has been speedily reduced to a skeleton through its nurse being changed, and some other attendant being appointed to look after the child. She has brought her favourite crotchets to bear on the young and happy creature, and transformed it into an emaciated and pale infant, bearing every mark of disease in its frame. I say this must have been grievously patent to every mother in this colony, and it is therefore an imperative duty—seeing the importance of the subject, and observing also how a trifling alteration in the diet of the child may make a complete wreck of its health, form, and mind—on the part of the ladies of Australia, as a matter of humanity, to circulate these papers amongst their acquaintances, in order that the numerous vulgar errors relating to the rearing and dieting of infants should be corrected, and this alarming infant suffering and mortality stayed.

We will presume, then, that the infant has been weaned in the manner described in my last article, and that it has to be from adventitious circumstances, “dry” reared, and that this is about the eighth

month. The main object the parent or nurse must have in view, can be summed up in two or three sentences. First, no matter what the food given, it must be only in such quantity at a time as not to distend too much the stomach; it must be of a quality pure, and free, as far as possible, from deleterious adulterations; and lastly, it must be administered at proper and regular hours, according to the age and habits of the child.

DRY NURSING.

In order to follow out as near as possible the natural laws, the child from eight to twelve months should be fed by suction—that is, from the bottle. All mammalia in the natural state live up to this period of life by suction, and it therefore behoves us to imitate Dame Nature, because this very act causes an increased flow of saliva in the mouth, which fluid incorporates itself with the food and partially digests it, especially acting on the farinaceous or starchy portions of the food, which—chemically speaking—it changes into sugar. The food should be given once in every four hours, and the utmost care taken, as directed in my first article, to keep the “bottles” thoroughly clean, and free from smell and acidity. The quantity to be taken is about a quart and a half in the twenty-four hours. Of course, if this be

exceeded, the child, instead of having a healthy digestion, feeling comfortable, happy, and cheerful, and dropping off into sound sleep, will become irritable, hot, feverish, and restless. As age increases, the child can be supplied gradually with a larger quantity, but certainly not at shorter intervals.

I may mention that, in the February article, I laid particular injunctions that with newly-born infants the food should be at an uniform temperature. The same directions apply here in more advanced periods. Newly-born children require nothing but constant sleep, food, and fresh air, and the more of the former and latter they get, the better will they thrive. Now, though the infant after birth must have this frequent administration of food, yet, when from eight to twelve months old, the child should be fed only every four hours, and then, from the first to the second year, it can be supplied at longer intervals during the night. The best food to give an infant of the age I have mentioned is oatmeal gruel, thin enough to be sucked through a bottle; and here is as good a form as it can be administered in:—Take a small quantity—say three teaspoonfuls—of oatmeal in a basin, pour on it a couple of tablespoonfuls of milk, which mix well with it; then pour a breakfast-cupful of boiling water on it, and stir well; add a little sugar after previously boiling for a quarter of

an hour; if you have not the sugar, you can substitute with advantage a little honey. Here is another formula for mothers:—Two ounces of the best flour, and one of prepared oatmeal, baked well in an oven, stir up well with a little cold water till it is well mixed; see that there are no lumps; then pour on this a pint of milk, not quite made up to boiling point; then, having stirred this well till it has been thoroughly incorporated, boil in a glazed pot for a quarter of an hour, and add a little sugar or honey.

INFANTS' ARTIFICIAL FOOD.

Here is an extract from the *Popular Science Review*; it is a preparation made by the celebrated chemist, Baron Liebig. He had a grandchild ill, and as this infant required a food stronger than milk, he concocted the following, which was found to answer the required ends, namely, a powerful nutritious agent, at the same time one which would easily assimilate:—

“LIEBIG’S SOUP.—Mix one tablespoonful of wheaten flour with one tablespoonful of freshly ground malt flour, and add seven and a quarter grains of the bicarbonate of potash. Rub this mixture well in a basin with two tablespoonfuls of water, and gradually add ten tablespoonfuls of new milk, stirring until all is well blended. Then sim-

mer this mixture over a gentle fire until it begins to thicken. Immediately, when it begins to thicken, remove the saucepan from the fire, and stir the soup briskly until it becomes fluid. Now place the saucepan again over the fire and let the soup boil gently for five minutes; then strain it through a fine sieve, so as to clear it from all the bran of the malt. No sweetening is required, for the soup thus prepared will be as sweet as milk. For the flour, use seconds or common household. The malt should be freshly ground for every time of use. This may be done in a common coffee-mill."

Another preparation by the same chemist is called "Liebig's Food for Infants." It is manufactured by Savory and Moore, and can be had from all chemists. It contains every ingredient of mother's milk; it is easily digested, and very nutritious. The meal is two tablespoonfuls mixed with half a pint of water. A good food is also prepared by adding to a tablespoonful of corn flour a quarter of a pint of water, and mixing thoroughly well; then take three-quarters of a pint of boiling milk with this, and add a little sugar and salt, and simmer for ten minutes. Your great object must always be to have the farinaceous matter well broken up by boiling. "Tops and bottoms" may also make a very good food, by adding half a pint of water to two or three whilst the water

is boiling; keep them boiling for five minutes, and add half a pint of milk, sugar and salt, and, if you have nothing else at hand, you can take the top crust of a loaf well baked, and use it as with the tops and bottoms.

Next month I will give a few more practical receipts, and endeavour to point out the way to relieve infants who are suffering from ailments of the digestive apparatus, and enlarge more fully on the rearing of children of more mature growth.

I have given a few of the recipes for treatment of early infancy in my last, but I omitted one which will be found of the utmost use; it is an excellent substitute for isinglass in cases of light diarrhoea. Put $\frac{1}{4}$ oz. hartshorn shavings and the crumb of half a stale French roll in a pint-and-half of water. Boil until it is reduced to a pint; sweeten with loaf-sugar; mix the quantity to be given with an equal quantity of warm milk.

It will be noticed that up to this time I have not mentioned meat as entering into the composition of the various foods, but we now arrived at that age when the rapid growth and formation of new tissue necessitates the assimilation of material equal in constituent parts to supply the continuous waste which is going on, and give new matter to build up the body.

Remember that food is of two kinds; one, which is to keep up the temperature of the body—in plain words, the coal which supplies the heat by its combustion in the system; and the other that which gives and produces flesh. The former is chiefly farinaceous, or that which contains starch as its chief element; the latter is animal tissue, as meat. As neither alone will supply the necessary food, we have milk to combine with the farinaceous food in early life, to give heat and flesh; as life advances further, we give a stronger and more nutritious diet known as animal food.

QUANTITY AND QUALITY.

I may remark, *en passant*, that many children are made ill by the ravenous manner with which they imbibe the farinaceous food, and this occurs more particularly in our hot climate, and also when the child is suffering from feverishness; and as the infant is then thirsty, the medical man is asked, “What shall the child take to drink, doctor? Shall I let it have a very thin gruel?” The medical attendant, not thinking of the evil he does, acquiesces; the child takes inordinate quantities of this drink; the more fluid parts are immediately absorbed by the lining membrane, or coats of the stomach; and there remains in the latter organ an

excess of food, which, by its presence, keeps up the irritation, and the fever is increased from this overloading of the stomach and bowels; and these organs, trying to get rid of this incubus of food, either do so by engendering diarrhoea, or else by excessive vomiting.

With the above warning, and simply stating that a little whey is the best drink in all these cases, I pass on to the next, quality of diet, and this I believe ought only to be administered in cases of great debility, at the age when teeth begin to appear, and then only at first very sparingly. I must again mention here the great utility of asses' milk in all these transition stages as being most adapted to ensure perfect diet before taking to animal food generally; and that my former horse-trainer at Kensington (Dan Robinson) has a lot of female asses for milking purposes.

Of course, different constitutions require different treatment; only at the age when the teeth begin to appear, and certainly not before, can you commence with broths and meats. At this age the mucous membrane becomes less irritable, and nature shows, by the appearance of the teeth, that something more is required than mere pap; besides, chemically speaking, the body wants fresh constituents, in order to build up teeth, bone, &c.

VARIOUS RECIPES FOR INFANTS' FOOD.

Now, in giving this meat diet the best plan is to commence first with a light broth made as follows:

Neck of mutton (having removed the fat), one pound; boil for six hours, lightly, in two pints of water till it is reduced to one-half; skim off the fat, and add a little salt for flavouring.

Or, take a chicken; divide it by cutting it lengthways; take out the viscera—that is, liver, lungs, &c.; then chop it into pieces, bones and all; put into a saucepan; add a little salt and a quart of boiling water; boil it down to a pint, and strain off the fat and scum; boil for three hours, and strain through a sieve.

I had better give one or two more recipes, of a character to be easily made, and a most excellent one is the following:—

Take one pound of lean beef, cut it into diamond-shaped pieces, and macerate all night in a pint and a half of cold water; then, when required for use, boil at a gentle heat for two hours, or, what is better, let it simmer, not quite approaching boiling heat, for two hours; add salt, and strain through a very fine sieve, having previously removed fat.

Now, of course, this constitutes the essence of the

meat, and therefore do not give so large a quantity at a time.

I have seen many sinking children restored by the use of this soup judiciously but not too copiously administered; besides which, when called in to see sinking children, if I find the stomach too irritable to bear food given by the mouth, I inject the soup by means of a male syringe; and I may as well here mention, that when a child has been brought to me with an irritable stomach, and that it is vomiting and will not retain food, it is always better to inject a good strong soup or broth, and thus for a day give the irritable membrane of the stomach rest; and by dint of a little coaxing, gradually accustom it to retain the food you desire.

Suppose by this time the "grinder" teeth have appeared, it will be as well to give the child a little piece of plain roast mutton to suck, cut from your joint at table; but this should be given as an accessory to diet, not as a regular food. About this age, one of the rusk-puddings mentioned in my last could be given in with it.

A little of the broth or beef-tea, or the following, is most excellent:

Beef-tea one pint, boiled rice four tablespoonfuls; or, for a change, in place of rice, macaroni or vermi-

celli. Boil the beef-tea with each of these previously-boiled articles for fifteen minutes.

A most convenient form for administering bread and meat combined, either as a thick paste, or a thin fluid to be sucked through a bottle, is as follows—taken from Dr. Thomson's work:—

“Take the white meat of the breast and of the wings of a chicken which has been roasted; free it from the skin, and cut it into small morsels; pound these in a mortar with an equal quantity of stale bread and a sufficiency of salt, adding, little by little, either the water in which the chicken has been boiled or some beef-tea, until the whole forms a thin fluid paste; lastly, put it into a pan and boil for ten minutes, stirring all the time.”

It will thus be seen that by this easily-made diet we combine the farinaceous with the animal; and as it can be given either as a suction- or other diet, a great desideratum is obtained.

Another excellent form of combining animal and vegetable food is by taking a breakfast-cupful of the simple beef-tea or mutton-broth, and beating with it a tablespoonful of arrowroot; then pour on this, stirring well at the same time, a pint of boiling water, and boil for twenty minutes, adding a little salt.

All highly-seasoned meats, sauces, potted-beef, &c.,

must above all things be avoided. Do not imagine that, as many mothers have said to me, "Oh, doctor, I've only given the child the merest taste," because it is the merest taste, no ill results are produced.

At another time I am met with the statement that the dear child liked such and such an article; and surely if it liked it, Nature was telling us what to give it. But I can assure the mother who reasons thus, that she will produce such a list of stomachic diseases in her child as will ultimately cause her to repent her folly. The best way is to teach the child when young to look to the mother to direct what diet it shall take, and not to be allowed to indulge in a mass of likings and dislikings, which will be very difficult of being broken off; and which will besides, most likely result in early disease of the digestive organs.

Fat meats are decidedly injurious to the digestive organs of young children; still it is necessary that a certain amount of fat should be given at times, and a most excellent means of supplying this want is by the occasional use of the following:—

Warm half a pint of new milk on the hob, and add to it a tablespoonful of suet which has had all the shreds and skins taken from it; mash well up, add to it the milk, then simmer well, and sweeten with loaf sugar or honey.

Another excellent preparation with suet is as follows:—

Take a pound of flour, four ounces of suet, skinned and smashed as above, and three-fourths of a pint of boiling water; put all in a basin, tie firmly with a cloth, and boil for two hours.

Now, very often, if the child has taken too much, or eaten too frequently, of this food, it will begin to show a state of uneasiness, exhibit signs of diarrhoea, and its secretions will be of an offensive and acid nature. If the mother's attention be drawn to these symptoms in time, the due admixture of a pinch of carbonate of soda, or five drops of what is called liquor potassæ (liquid potash), with each meal for a few days will effectually remove them, causing no expense to the mother, and saving her many wakeful nights.

We are now coming to a more advanced period of childhood, and I feel it will be better for me to continue uninterruptedly with diet up to adult age, and treat the various diseases of infancy upwards *seriatim*. In my next, therefore, I shall finish my articles on diet, and shall then dwell more particularly on clothing, exercise, &c., and I will point out the reason why young Australians, as a rule, are so thin, pale, and slender, and have such delicate constitutions.

INFANT DERANGEMENTS.

THE child is now arriving at a more mature age, and one which generally has not that attention paid to it by the mother, in the matter of diet, which it should have. The child, being able to run about, is permitted to eat almost anything it pleases, and the consequence is a train of evils, which often lead to serious organic diseases in after-life; though, in this primary condition, they induce mere functional derangement. Now, as mothers will often hear the doctor say, "Your child, madam, has functional disease of such and such an organ," and at another, that it has "organic disease;" and as I shall frequently have to make use of the terms, I may as well at the outset say that functional derangement means simply that the particular organ in question does not perform its duty properly, from a mere circumstantial derangement, often sympathetic—that is, acting in unison with another organ; in contradistinction to where it is an organic disease of the organ, which latter will, of course, make the organ become deranged in its function—in plain words, what is called functional disease means an organ out of gear. As an illustration—a little bit of dirt gets into the watch, and one of the wheels is thrown out

of its symmetry of action, the true time is not indicated, and the parts do not act harmoniously, and other parts of the watch are consequently thrown out of order. Remove the dust, and all goes on rightly; but if this is not done, the wheel which was thrown a little out of its working rhythm, by its tilting, becomes worn on one side, and no longer performs its function properly; the other wheels depending on this one are thrown out of their harmony of action, they become likewise worn unequally, the watch goes wrong, becomes useless as a correct time-keeper, and ultimately stops. My lady reader, follow out the simile, and when your delicate yet growing child has the particle of dirt deranging the other works, as is shown by the functional derangement of the organ, remove the cause at once, before other organs become implicated, and stop the works altogether.

I have stated that at this age mothers must most zealously watch their children, and keep a Cerberus-like guard on that entrance of the body—the mouth. Now is the time that everything eatable is eaten, and the more surreptitiously it is obtained, the more it is enjoyed. Moreover, the growing wants of the child cause it to have fresh desires and tastes, as a matter of instinct; the increase of exercise, and consequent waste of tissue, and the increasing bulk of

the child, demand an increased amount of food; but at this age it must be remembered that this want or desire may be carried to excess, and then we have a depraved and morbid state of instinct, which, once indulged in, leads to disease; this being established, a useless regret is indulged in by the mother, who finds the difficulty of breaking off a habit of craving which increases by what is eaten.

The mother here will say, "I am surrounded by all kinds of difficulties; how shall I surmount them? and shall I find a way to steer from all these dangers and shoals which threaten my son or daughter?" Obviously——let nature be your pilot, my dear madam, assisted by the rules which are laid down by art.

Suppose your child to be ten years of age—you know he is growing—you must provide him with a thoroughly nutritious article of diet; and let it be understood that your boy must not be farmed on one peculiar diet, as is adopted at schools, for instance, where every morning a certain given food is administered without regard to variety, and so that it is satisfying, all requirements are supposed to be found. It is really at this age that the turn is made for good or for bad, according to the diet given; and I have but little hesitation in saying that, accordingly as the child is fed at this age—all

other things being equal—so will the future man be. It is the same with young colts and all other animals at this stage—the development of the animal is arrested or increased in direct ratio to the nutriment supplied. Parents should therefore pause before sending their children to board at schools without first making themselves thoroughly conversant with the diet allowed to the pupils; or, instead of seeing their lad, who left them ruddy of complexion and strong and well-nourished, they may get returned to them a sickly, sallow-complexioned, weakened, and ill-nourished boy, the result of the stomach not having had presented to it materials from which could be extracted, digested, or absorbed material to build up the body now rapidly developing itself. I ask, you who are farming, do you expect to get a sound and vigorous plant from a soil which has not been well manured? Why? Because you say, “Well, in order to raise this plant, the elements must be in the soil, or if not there, they must be artificially placed there; or in other words, the land must be manured, in order that the constituent portions of the plant should be supplied.” The same with food and the animal kingdom. It has been stated that a boy of ten requires as much food as a hard-worked labourer in a long summer’s day. Remember that the lad is growing, and requires tissue

to build up with; in the other, the labourer, he requires material to supply the waste of tissue, through the loss by friction. Now, irrespective of the character of the food as regards its building up the body, due regard must be had to the fact that a suitable diet is required for the purpose of strengthening the digestive organs; for if digestion at this age gets defective, we can get no strength or building-up material out of our food—that is, we can't digest it. It behoves us, therefore, on this account, also to pay attention to the quantity and quality of the boy's food, and the times also of taking it, in order that the child should have a perfect digestion.

DIET OF CHILDREN INFLUENCING MIND AS WELL AS BODY.

To illustrate the above remarks, I might be allowed to state that I have noticed many scores of cases where, through innutritious food, youths brought to me have had their temper, pluck, determination, and independence of spirit (so characteristic of boyhood) thoroughly and effectually destroyed, through this very injudicious food of schools, and the negligence of parents; though I must acknowledge that this very diet has been bulky and filling; but let it also be

understood that, though I may order a diet containing all the nutritious elements required for the growing youth, yet so great is the difference and peculiarity of constitutions, that what is nutritious in one is not so in the other, as is illustrated in the case of lads purchasing sweetmeats; whilst, on the other hand, another will buy fruit, his fellow-mate will sneer at that, and make his way to the pastrycook, and invest in spice-nuts and ginger-bread. Familiar as illustrations must be to many of my readers, it has perhaps not struck them as to why these different tastes are indulged in; the reason is, the wants in the system of the growing youth. Some, for instance, have a tendency to adiposity; these reject the fat-forming material; others, the reverse, will seize upon hot roll with the crumb picked out and filled with treacle, or will take the same composition in the more elegant preparations of spice-nuts and ginger-bread, because they require a fat-producing material which they do not find in their ordinary diet. Now, though this seems very trivial to my matron readers, I assure them it is of vast importance. For a study of the effects of the different kinds of food on boys will show that, according to the diet, so will be not only the physical, but also the psychological condition of the lad; and that great energy of character,

and power of will, which we are all desirous of seeing in our children, is begotten by the quality and quantity of food, in the general complying (with proper restrictions) with the instincts of the child. We all believe in seeing our children strong and vigorous, and yet many of us think that if we give our child that food which our neighbour gives, we fulfil our duties ; but I trust I have here made myself plain on the matter, and that I shall have demonstrated clearly to parents the necessity that exists for them, prior to sending their children to a boarding-school, either as day or weekly boarders, to see that there is a large range and diversity in the food which their children will have to live upon, for, depend upon it, no man ever became a great hero on water-gruel ; and although it may be said, " Oh, we have seen that they do not have poor stuff like water-gruel," still, as I have endeavoured to show, one continual round of a certain diet without variety will fail to "raise" a lad vigorous in intellect and physical power.

DIET OF A LAD TEN YEARS OLD.

What, then, should be the kind of diet a lad of ten years and upwards should live upon?

For his breakfast, a basin of good well-made Scotch oatmeal porridge, but made with milk instead

of water, with a slice of brown bread and butter, or a chop cooked on the gridiron, and a slice of brown bread and a cup of coffee. Let this meal be a good substantial one. If the lad is delicate, a lightly-boiled new-laid egg, or a rasher of bacon, with brown bread and cup of coffee.

Dinner should be made up of a plain roasted joint—beef I believe in—and a well-cooked potato; if a little cabbage be given, see that it is well cooked, and give a little pepper with it. Take a slice of brown bread, also; and half a small plate of sago, arrowroot, or tapioca pudding, or a cooked apple; and, if you like with this, if the boy looks sickly, to give him a wineglassful of good colonial wine or stout, nature will thank you, and his food will the more easily be digested. You can, in order to give assistance in “filling up the corners,” give the lad a plain suet pudding with gravy; it is nutritious and comforting to the juvenile of ten years and upwards!

At night, for supper, give him a cup of milk and a slice of stale bread (brown) or toast with butter; and I would not give him anything after half-past six at night. Always make the child rest before and after eating, if only for ten minutes. Don't let them rush into meals right away from their play, neither must you let them run away to school directly after, and therefore I enjoin regularity of hours, so as to

allow the children time to get to school and not to hurry.

Notwithstanding the seemingly definite rules I have laid down in my last, it must be distinctly understood by my lady readers that no certain plan can be established as a standard diet for children, especially at the age of which we are now treating. Nor must it be taken as a general axiom that there must positively be three meals per day, neither more nor less. On the contrary, children have a craving appetite, and this is, no doubt, wisely established to supply the waste of tissue and increasing growing wants of children. The incessant demand should cause a free, but judicious, distribution of cake, bread and honey, bread and butter, gingerbread, etc., wherever there is a great amount of exercise in the open air by the child, or if he is growing rapidly. I need not, however, here caution the mother from allowing this craving to become a habit in the child, and, therefore, I repeat, give a free but judicious distribution. If this judgment is not exercised, the child gets an inordinate appetite, which it takes with it into adult life, and thus establishes the train of diseases of that organ to which Abernethy justly attached so much importance, viz., the stomach.

DIET OF CHILDREN REQUIRES TO BE ALTERED TO ACCOMMODATE CIRCUMSTANCES.

It is, however, a well-known fact that adults, aye, and even medical men, frequently, without thinking, make no distinction between feeding themselves and their children. It must be distinctly understood, in feeding children, that according to the habits of the child—as, for instance, its activity, or its sedentary pursuits—so must the food be regulated. A child, also, that sleeps much, and is drowsy, should have its diet diminished; for, whilst sleeping, the body requires less nourishment than whilst waking.

Climate has its influences also. My Tasmanian and New Zealand readers must feed their children on a heavier and more carbonaceous or fatty diet than is required by my Queensland readers. Let it also be used as a proverb that both infancy and old age require frequent repetition of meals. This, of course, does not apply with children who have arrived at the age we have been latterly alluding to, namely, those of ten years and upwards. In these cases, a plain diet, of a mixed character, and at regular intervals, should be the order of the day with all parents who wish to lay a

thorough good foundation of health for the future man.

I have thus brought my matronly friends to that epoch, from early infancy up to ten years. After this period, my former observations respecting diet, and the various hints I have given to adults, will suffice for the growing youth, except that he (the youth) can take any amount of food, and without that chance of injury which a full-grown adult would suffer from. Yet, let this golden law be observed by parents, never to allow the boy to eat to repletion; teach him the grand law of abstinence whilst young, and also that of self-denial. It's a great mistake for people to imagine that large quantities of food taken into the system give strength. Remember, IT'S WHAT YOU DIGEST does you good, and NOT WHAT YOU EAT. Take what suffices for the wants of the body; all over that lays the train for future disease, and primarily exhausts the digestive organs. Besides which, abstinence in food gives impetus and power to the brain, and, therefore, in regulating the quantity of food your child shall take, you are, in like manner, regulating the mental calibre of the future man. And whilst speaking of the mind, let me say that, for increase of brain power, I believe there is no diet like fish-

food. It contains phosphorus, and that chemical enters largely into the composition of the brain.

I do not know whether it would be wise, in a work of this kind, to diverge into the different elements of food, and their relation to the animal economy. I think I have dwelt long enough on these matters, as regards infant life, so far as this colony and climate are concerned. I think now I will commence a new part of my programme, "How to raise young Australians," by showing the various diseases of infantile life in this colony.

Passing over, then, those parts which I have already glanced at as arising from indiscretion in diet in the very early age, I will mention one, namely, disorders and diseases of the stomach and bowels of children.

DISEASES OF THE DIGESTIVE ORGANS OF CHILDREN.

It must be obvious to most mothers that the delicate condition of the digestive apparatus of an infant can be readily disordered—or, to speak more pathologically, functionally deranged—through any of the causes above mentioned; and, again, they can be deranged through sympathetic action with some other organ of the body being diseased. Now, I have frequently here remarked that, if functional

derangement of an organ is allowed to progress, *diseased action will set in*. Hence the immense importance of the mother keeping careful watch, to guard against and counteract any of the symptoms hereunder enumerated.

But the mother will remark, "How am I to distinguish between diseased action and mere deranged function?" Well, as near as possible, I will give it thus, simply stating that the line of demarcation is very thin. In functional derangement there is not great fever or great thirst. There is purging even of green matter, retching, vomiting, emaciation, and debility; but still there is not, as in inflammation, heat, great thirst and desire for cold drinks, a hard pulse, and a stomach which, when gently pressed with the finger, causes great pain, and is very tender.

These can be put down, then, as the distinguishing mark for a mother to ascertain when the disease can be looked upon with nearly a certainty that her little, lovely, cherished one is about to leave her. Having, then, as clearly as it is possible, shown the means of distinguishing the fatal from the non-fatal form of disorder of the digestive organs in the child, let me, in brief, point out the symptoms which will supervene with all children who have not been dieted according to the rules above laid down.

If the infant has had an attack of vomiting, followed by another or two, and that it throws up curdled milk as a hard mass, and that the smell arising from it is quite acid; that the child is irritable, and moans, and is restless and tosses about, and then gets a diarrhoea, and that this continues, and the motions are of a green colour, then you can be certain either that the milk has disagreed with the child, or that the latter has taken something which it should not have had, namely improper food; and then the sooner prompt and determined action is taken the better, or inflammation will set in, with its accompaniment, ulceration, and death ensue.

If the child, then, is at the breast, let, *at once*, the nurse be changed. If it is being dry nursed, change the cow, and give only cow's, or, what is infinitely better, asses' milk, with water. Place a large mustard plaister over the abdomen, and administer a tepid bath for five minutes once a day, taking care to wrap the child in flannel after the bath, and thus let it have a comfortable sleep. If the extremities are cold, as they frequently are, put a small bottle of hot water to the feet. Now will be the time, also, to administer any of the light foods—receipts of which I gave some time back—such as the thin isinglass or weak broth or beef tea without vegetables being boiled in them; but my sheet anchor always is

asses' milk, for which, as I stated before, I always keep a number of asses. I commence my treatment by giving a good purgative, in order to carry off the morbid matter; and this I make up from the following simple ingredients. I give them in English:—

Epsom salts, half an ounce,
Carbonate of magnesia (light), two drachms,
Oil of cinnamon, ten drops,
Tincture of ginger, one drachm,
Glycerine, or syrup, half an ounce.

Dissolve the salts in hot water, and mix the whole in a quarter of a pint of water. Then give the child of four years a dessertspoonful at once, and another in four hours. Children of greater or lesser growth, doses in proportion.

If the child is under two years old, it will be as well at once to look to its gums; and if they are swelled and red, take a sharp penknife (in the absence of a gum lancet), and, having tied a piece of calico round every part except the point, to prevent cutting any other part, incise down to the tooth boldly and freely; and read my chapter, under the article of "Teething."

Having given this medicine, and placed the child on a milk diet, and a free motion having been obtained, give to the child of four years, and other ages in proportion,

Castor oil, two teaspoonfuls,
Glycerine, one teaspoonful,
Laudanum, two drops,
Tincture of catechu, 20 drops,

for a draught. The stools will now be found to have become of a more healthy character, and I would then, the next day, administer two teaspoonfuls of the following mixture, to strengthen the child and give it an appetite:—

Citrate of iron and quinine, 20 grains;
Glycerine, one ounce;
Water, three ounces;

and administer beef-tea or mutton-broth, thin, and without fat.

If there are in the earlier stages any symptoms of inflammation, as shown above, in addition, place a mustard plaister well over the abdomen, and give the child a hot bath. If there is great irritability of the stomach, I generally give a powder containing a grain of calomel and a sixth of a grain of opium, in a little sugar or honey.

Whilst advising the use of opium, as above, I must here caution both the parent and the medical reader from the bush to be very chary as to how they use opium with children, and to be careful as to the dose. Nothing can be viewed with such suspicion as this drug in childhood, for it seems to be deadly

to infant life ; and I must therefore reiterate, that in the treatment of children's diarrhœa, I have taken four years of age as my standard, and that if they exceed this age, the dose should be increased, and *vice versâ*.

Should the disease have resisted the above treatment in this, the acute stage, then other remedial measures must be had recourse to. I will allude to these in my next article, as I think too much attention cannot be given by mothers in the bush to a disease which carries off so large a number of our young Australians.

DIARRHŒA.

Another disease, which frequently carries off children very rapidly, and is most seriously fatal in these colonies, is a diarrhœa resembling cholera. This disease comes on very suddenly, and if not nipped in the bud, death is nearly certain to supervene. The disease may, however, continue for six or eight weeks, and during this time the child will be completely prostrated, and at the first glance it will have the appearance of dying. The child looks quite still, takes no notice of passing events ; its features are pinched, and face pale ; there is a leaden circle round the eyes and lips, the eyes are sunken and half closed ; but if it is

roused, the infant will suddenly start up and sharply look round, and begin to cry, and will then as quickly revert to its old semi-deathlike look. The child is purged sometimes to such a degree that you could compare it to water running out of a bladder. These discharges—for you can hardly call them stools—are of a white or green colour; sometimes, but seldom, yellow. When green, they look like slimy parsley, in pieces. The breathing is regular, but the pulse is very slow and weak, the legs are cold; there is great thirst, the stomach and bowels hard, and the tongue pretty natural. Sometimes there is a total cessation of these symptoms. The mother fancies her child is about to be restored to her. She relaxes her vigilance—alas! to find that her little pet, like the last flickering of a lamp, suddenly lights up for a moment, and then is extinguished for ever. As a rule, the child becomes more and more emaciated, and at last dwindles, as it were, gradually to its grave.

This disease is often, from the comatosed state of the little sufferer, confounded with head complaint or brain affection; but, on the death of the child, we find that the lining membrane of the stomach and bowels shows a disorganisation, or softening. That it does not arise from, or is to be confounded with, cerebral affection, will be found in the fact that

when the child is roused from its comatose state, it will take notice of all which is surrounding it.

My treatment in all these cases is to give the pulp of raw meat, pressed through a sieve, as directed in some of my former chapters. The more energetic you are in your treatment, the greater the chance for the child. Your object must be to sustain the strength of the child, and arrest the purging. Frequently the pulp of raw meat is sufficient. When such is not the case, then recourse must be had to astringents, as in the following mixture for a child four years old; of course a lesser dose in the case of infants, with whom this disease is more prevalent than with those of elder growth; but I adhere to this same age of four years right through, so that no error shall occur in the dose:—

Tincture of Kino ...	...	...	2 drachms
„ Catechu ...	...	...	1 „
„ Cardamoms ...	...	...	2 „
„ Opium (laudanum)...	...	...	6 drops
Spirits of Aromatic Ammonia ...	...	...	1 drachm
Peppermint and cassia water mixed,	sufficient to make 4		
	ounces.		

Take two teaspoonfuls every hour till purging is stopped, and, with this, two teapoonfuls of burnt brandy will be both stimulating and astringent.

If, at the same time, the child's abdomen is cold, rub with the naked hand, or give a strong mus-

tard plaister—or if that is not at hand, the abdomen to be well rubbed with the eucalyptus oil (the oil extracted from the leaves of the native gum-tree)—great good will ensue; and with this, it will be as well to place a bottle of hot water to the child's feet. Beware, however, in trusting to the stoppage of the purging, because frequently this is only the precursor of death. Watch well your child, and see if there is any improvement in other respects. Feel if the surface is warmer, if it takes more notice of surrounding objects. Should you find this not to be the case, and that your child is sinking, give it extra brandy and water, steep a piece of flannel in hot water, wring it, and then fix it round the body, and put a dry one round or outside that. If that does not suffice, pour over the blanket of hot water (after wringing it) a small quantity of spirits of turpentine and eucalyptus oil, and the recipe for which I have so frequently given in these pages; even, with a small male syringe, inject in the anus the pulpy juice of the raw beef-tea.

A DIGRESSION.

I may remark here that my allusions to the milk given as food to children being frequently poisonous, has been brought out lately and discussed in medical circles. It will be remembered that I stated that

frequently the child suffered from a disease which baffled the skill of the medical attendant, but that if attention had been paid to the milk which had been given to the child, and from thence to the cow that gave it, the problem could have been solved easily enough. It would be found that the animal was suffering from a disease, and that this was conveyed to the infant by the milk the latter imbibed. This was laughed at, as was also the statement I made in my lectures, that diseased meat could repeat itself in the consumer of the same; and I illustrated the ill effects of taking pleuro-pneumonic beef. No beef was eaten at that time; and the butchers and squatters, together with the medical faculty of Melbourne, tried to laugh at the idea; but, nevertheless, the public believed me, and did not take kindly to beef, and, I must say, to their advantage. And now that pleuro-pneumonia is raging, I would caution (without wishing to alarm unnecessarily) my readers to at least use the ordinary amount of discrimination in the selection of their beef.

DISEASED MILK.

My remarks, however, are now more particularly directed to the disputed subject of diseased milk, and, strange to say, my words have been proved to

be true by recent observations in England, which have been copied into our daily papers lately; and as these have been patent to all my readers, I will not quote them here, but I will make a quotation from a recent paper, written by Mr. Lawson Tait, of Birmingham, "On the Influence of Milk in the Propagation of Contagious Diseases." I give here the gist of his remarks, showing that, not only may the milk in itself be poisonous from the diseased animal, but, further, that it may be the means, by its absorbing qualities, of taking up diseased and extraneous matters. He says—

"Milk has a peculiar power of absorbing smells. If a bowl of milk is placed near recent asphalting, it will be found to taste and smell of the asphalte. It is found that milk will absorb a variety of offensive odours, such as those from assafœtida, fœces, and urine. This power of absorption resides principally in the cream. It has not been positively proved, but it seems not unlikely, that it may in like manner absorb contagious matters, and so be a means of propagating such diseases as typhoid and scarlet fevers."

After such remarks, and from so great an authority, and as the *Times* has recently taken up the subject, I leave the sneers and remarks of my medical brethren of Victoria to go for what they are worth.

Doubtless, after a short time, they will propagate the same views which I enunciated when they see them backed by other authorities, but they will forget to mention who was the author and first promulgator of them. They sneered at my remarks about carbolic acid as a remedy for snake-bites, but the very latest authority from India, as shown by Dr. Frayer (to whom I sent my letter anent carbolic acid and its antidotal qualities in snake poisoning) clearly proves, by this last mail's despatches, that the only dependent remedy is carbolic acid for snake-bites, with the usual remedies, as has been demonstrated by my lectures and by my writings on the subject.

I hope I may be pardoned for my egotism in thus referring to them here, but I hope it will be looked upon as excusable, considering what I have had to put up with in the shape of animadversion for promulgating my ideas; and more especially as it may show to mothers that my humble popular writings for their behoof have, at least, the merit of originality, and that, moreover, they cannot be too careful in the matter of milk—to inspect and taste it before giving it to their children, especially as pleuropneumonia is now so prevalent. Farmers and dairy-men may also take a hint from the above remarks concerning the absorbing qualities of milk, and pay a little more attention to the cleanliness of their

dairies, and the preservation of them from bad smells and diseased or decaying matter.

A FATAL MISTAKE OFTEN MADE BY PRACTITIONERS.

“Oh, doctor! I am so glad you have come.”

“My dear madam, that is always the way with the public when they want us; but as soon as the patient is getting better, or pronounced out of danger, so soon do we find this gladness, on the part of the sufferer or his friends, gradually cool down and disappear; and, in fact, your observant doctor will notice, madam, that the patient’s friends bob up and down in their cordiality like mercury in a barometer, accordingly as the danger exists and otherwise.”

“Now, doctor, pray don’t stand talking too long there; pray step upstairs with me, and see little Johnny; he is so bad—I can’t tell what is the matter with him.”

“Tell me the symptoms, madam, whilst I take off my hat and gloves, and thus we will save time. Now, madam.”

“Well, doctor, Johnny was very well a week ago; but he had a diarrhoea—I don’t know what caused it—and since then he has been very bad indeed; his head has been heavy, and he has lain in the nurse’s arms with a perfect languor, taking no interest in

anything; in fact, he is half asleep, occasionally opening his eyes, and then closing them again for a length of time. As you were not in, I called on Dr. Bolus. He says the child has got water on the brain (I think he said) arising from congestion.

“ Well, madam, what has he done for the child ? ”

“ Why, he ordered leeches to be applied to the temples, and also gave Johnny a dose of purgative medicine.”

“ Yes, madam, and what followed ? Be quick, please; for the case is getting important in my eyes. Did you put on the leeches ? ”

“ No; for oh ! doctor, he has turned very pale, and is so weak that really I am afraid he might die whilst the leeches are on him. So I hesitated to allow them to be put on. Dr. Bolus is upstairs, waiting.”

“ Madam, you are a perfect medical man—only in petticoats. I shall have much pleasure in following you. After you, madam.”

Doctor and mother go upstairs, and enter into the child's bedroom. Johnny is seen lying, very pale, on the bed, with his eyes closed, and to all appearance asleep; only on the entrance of doctor and mother does he for a moment open his eyes, and that, too, without seeming interested. Weather very hot; still the child is neither hot nor very feverish.

The two doctors bow ; seem externally well pleased with each other, and vigorously shake hands together ; but there is a glaring devil lurking in the eye of each, with a supercilious smile, as much as to say, "What do *you* know of this case, I would like to know ?" In a cup close by are four Murray River leeches, wriggling about like sharebrokers under the Verandah, ready to pounce on any unfortunate victim who wants his blood sucked from him.

"Good day, Dr. Bolus ; happy to have the pleasure of meeting you. I understand my little friend Johnny is very ill ; might I ask you what, in your opinion, is the matter with him, before I examine my little friend?"——

"Oh yes, Dr. Blank. My opinion is that our young patient has got effusion on the brain, and that is the result of congestion. He has evidently had inflammation of the brain."

"Indeed ! That is a very serious thing, Dr. Bolus ; let us go and examine him. I see you have some leeches ready to put on him ; one of the best remedies, in all such cases, to relieve congestion. I disapprove, however, of leeches, as a rule, with children ; because I dare say you, like myself, have frequently found that when once they have bitten, and they fall off, you frequently have a great difficulty in arresting the bleeding which ensues."

They go to the bed-side. On placing his hand upon the pulse of the little sufferer, Dr. Blank's face, after a few seconds, changes in a most serious manner; he passes his hand along the child's skin and temple. Dr. Bolus eyes him with a misgiving yet suspicious look. Dr. Blank pulls out his watch, and for the second time feels the child's pulse; then lifts the eyelids of the child, which Master Johnny resents with a howl.

Dr. Blank, loquitur: "Dr. Bolus, it is a merciful thing I just stepped in at this opportune moment to see this child! Mrs. Dash, will you please retire for a short time, while I consult with Dr. Bolus on this very serious case?"

Mrs. Dash retires.

"Now, Dr. Bolus, as we are alone—for I would not express myself before Mrs. Dash—allow me to inform you, that if you had put those leeches on this boy's temples, within twelve hours he would have been a *gone'r*."

"Dr. Blank! Allow me to inform you that I know my profession as well as you do; and that if you do NOT *put those leeches on*, that child will be a *gone'r*."

"Dr. Bolus, you never can have seen, in your life, a case such as this, or you would not talk in the manner you do."

“ Dr. Blank, I have seen more cases of diseases of children in one year than you have done in your whole life.”

“ Well, Dr. Bolus, I won't dispute on that point. A man may see thousands of cases and go through them in a routine manner, without ever improving his patients, or his own knowledge—although experience often does it—yet a medical man may see, as you know, some thousands of cases, all being alike in their symptoms, and he may treat them all alike, and he may consequently kill hundreds; but the man that discriminates, and is observant in the diseases of children, cannot fail, although he may not have seen the number you mention, in saving the lives of hundreds, who otherwise would have perished by the ‘routine’ treatment.”

“ Well, I acknowledge, Dr. Blank, that the position you assume is not to be disputed; and I am honest enough to state (as, in our profession, we all should be), that, if you show me I have erred, to save my little patient's life, I will acknowledge the same, and bow to your judgment; but you must show it clearly.”

“ Well, Dr. Bolus, that is magnanimous. *Now, here then is the difference which exists between congestion of the brain in young children, in this colony, and mere simulation of the same. If this child had*

congestion of the brain, it would have all the symptoms which it now possesses; but there would be a strong pulse, the child would be very much flushed, and the skin hot; or, in plain words, there would be fever accompanying it. If, on the contrary, it is a simulated disease, there will be no increased pulsation; and although there would be all these symptoms of congestion, yet the skin would be cool, and he would lie still and quiet in the same way. Now, doctor, put your finger on Johnny's wrist; you feel the pulse does not beat strong, and his face is quite pale, and his skin is comparatively cool. Now, congestion comes on from over-excitement; but the simulated form comes on from sudden loss of power; and I remember, now, that on coming upstairs the mother told me these symptoms had come on and supervened directly after taking some medicine, or after diarrhoea, which had purged and weakened the child. Now, Dr. Bolus, you will see, I hope, the reason why I state that, if you administer leeches, the child would die, or, as I termed it, be a *gone'r*. HIS MALADY ARISES FROM WEAKNESS. To put leeches on now, and thus deprive the child of the little blood it yet possesses, would be its death. On the contrary: reverse of the treatment should take place. The child should be fed on the strongest beef tea obtain-

able, and have a few drops of aromatic spirits of ammonia and tincture of bark administered. This will give power to the heart to pump the blood to the brain, and restore the latter to its original tone; the child will become observant, will waken up and recognise its mother and nurse, and in a few days you will see it running about. If the child, however, were flushed, doctor, and had a quick pulse and throbbing temples, then you could put the leeches on the temples, or in any other place, and relieve the engorged vessels with the greatest benefit to the child."

"Well, Doctor, I believe you have taught me a practical lesson in a few words, and in a simple manner, which I trust I shall never forget."

"Dr. Bolus, you are a sensible man; and it is always a pleasure for me to meet a medical gentleman who is open to conviction, and not prejudiced with his own opinions. Let us now call in Mrs. Dash, and I will state that, upon mature consideration, we have both thought it advisable to leave off the leeches. Ring the bell, doctor, and whilst Mrs. Dash is coming upstairs, as she has left some very good port wine in this decanter, let us 'liquor up.'"

Dr. Bolus rings the bell, and—they "liquor up."

TO DISTINGUISH MERE COLIC AND INFLAMMATION OF BOWELS IN CHILDREN.

(Dedicated to the Mothers of Australasia.)

“DOCTOR, my child has had the stomach-ache for the last few weeks—nay, I may say, months.”

“Indeed, madam. Do you find that there is a great amount of rumbling and rolling of wind in your little favourite’s inside?”

“Oh, yes, doctor; and then baby cries and moans.”

“Ah! h’m! yes! And when you press your hand on the child’s abdomen, it does not cry any more, does it, madam?”

“No, doctor, that’s just it; for I find baby will lie nearly quiet if I lay it on my knee with its stomach downwards, or let it press itself on my arm. What is the cause of that?”

“Wait a moment, madam; let’s know a little more of the history of the case before we decide. You see, children of tender years require to be doctored like horses—now, don’t start and look so astonished. I only mean that children can no more describe their

pains and woes than the brute creation, and you can only judge, therefore, by the symptoms; the more careful the real veterinary surgeon is in observing the smaller matters, the more likely is he to be successful in his practice; because, the less liable he is to error in diagnosing, or discovering the nature of the disease, the better will he know how to treat it. It is just the same, my dear madam, with the child-doctor. As a rule, the physician or the surgeon is ill adapted for the treatment of infantile diseases, for these gentlemen are usually engaged in the treatment of adults, from whom, of course, they get replies to any queries they may make; but it is your 'general practitioner'—(by the way, madam, have you got a glass of sherry handy? the weather is getting exceedingly warm; thank you)—well, as I was observing, your general practitioner is the useful hack of the profession. He, my dear madam, does the whole of the hard work, and, like his equine simile, gets but little reward for his labour; but, madam, he gains two things—that is, experience and perceptive powers of observation, and, consequently, quick means of diagnosing, viz., discovering the nature of disease in children."

"But, doctor, I don't see the comparison holds good with the veterinary surgeon and the child-doctor. I'm afraid, doctor, I shall never look upon

you, but what I will think of the brutes you allude to in comparison with my child."

"Madam, I feel flattered. (This sherry is excellent.) Pray, be seated, and I will try and explain to you how I make the simile. When I first came to this colony I practised as a general practitioner, and I had on my door, over the faciar, on the panels, and wherever you could find a space to write a line, the following words:—'Diseases of women and children especially treated.' In fact, I had been in practice for one of our large maternity charities of London, and afterwards for myself in a very poor neighbourhood in London. I am sorry to say that my sole remuneration, in nine cases of every ten, was, 'Thank you for your services, doctor, but I am too poor to pay you otherwise than with thanks;' and the second remuneration was experience. Now, a man cannot, madam, pay his butcher and his baker with thanks or experience. (Yes, thank you, I will take just half a glass more.) Well, I arrived in this colony with no cash, but plenty of experience, especially in 'diseases of women and children;' and so I put the hackneyed words all over the house, and advertised it in the newspapers, and consequently had a large practice in those cases in this colony in the early days, until I found the work—night and day—was too much; I gave it up and took to

my consulting practice; but nevertheless, my dear madam, I respect the opinion of the general practitioner in regard to the diagnosis and treatment of your children, over and above that of the physician and surgeon. And now, madam, here is the comparison between the veterinary and the general practitioner. Both of them have patients who cannot tell their woes, and they are therefore compelled to judge by signs. The veterinary, when he enters the stable, has all his wits about him. Pardon me if I give you one example, only to illustrate the case of your child in the present instance; and in giving this, it may illustrate to you, by the very opposite case, how to distinguish between inflammation in your child and mere symptoms of inflammation; for it is the blundering of the medical man, and of mothers, in distinguishing between these two cases, that causes the death of thousands of our infantile population, and, perhaps, this contrast may indelibly impress it on your memory. On entering a stable, the veterinary will look at the position of the animal. He will see that the horse is restless and pawing his litter. Your baby, madam, is restless, you see, and rolling about on the bed. The animal (I allude, of course, to the horse, madam) looks in a most wistful manner at his side, and very anxiously at his flanks. He lifts his hind legs to kick, as it were, at his belly, but the

veterinary notices that he never goes so far as to kick, and rolls on his back, and struggles. He puts his hand on the horse's belly, and the moment he does so he finds it very hot, and the animal shrinks from him. I will not trouble you about pulse and so forth, as I only want to bring clearly before you the external signs, and those which are in your power to be at once discerned. When the veterinary has gone thus far, he says, 'Oh, here is a case of inflammation.' Quick remedies must at once be applied, or the animal dies; and in most cases he does die, and that, too, because of the ignorance of those who have tried remedies for colic, believing that this was all the animal suffered from, and gave powerful stimulants, which increased the inflammation; death, in most cases, is the result."

"Well, doctor, you have really interested me; and as nurse has got the child, tell me, for my future good, how I can clearly distinguish between inflammation and these colic pains; for I have had a number of neighbours come in, who have told me to give baby ginger and peppermint, and even an old nurse told me to give the child a little turpentine. Now, I know these are strong stimulants, and though they may be good for expelling the wind and warming the stomach, still, I can see that, if inflammation were present, they would frightfully increase it."

“Precisely, my dear madam; there is the great importance of every mother knowing this simple difference. Pray, let me still further illustrate. Let us suppose the veterinary goes into another stable. Well, he sees an animal with the same symptoms; that paws the litter, looks at his sides, rolls about, and kicks with his hind legs at his belly; in this instance, the veterinary notices that the animal really does kick his belly. He even kicks till the blood comes from his sides, to get rid of the pain. The veterinary, observing this, will put his hand on the animal’s belly, and notice that the skin is *not* unnaturally hot, and that the beast will bear pressure; and if the whole palm of the hand is pressed hard on the belly, the animal bears it, and seems relieved. This, then, madam, shows in a most simple manner to the M.R.C.V.S., as plainly as possible, that there is no inflammation. What is the consequence? In the first case, he bleeds quarts of blood from the animal, blisters, and lowers him; while in the other case, he acts quite the reverse. He stimulates and gives turpentine, spirits of ammonia, gin, &c.”

“Well, now, doctor, I do not think I shall err in that respect as regards horses; but, as I shall not have to nurse young colts, I hope, perhaps you will come back to my baby, and show me how it is you

know that this is not inflammation, and sit quietly down to a glass of sherry whilst the child is screeching in the nurse's arms."

"Madam, the sherry is good, and I have spent a few leisure moments pleasantly in your amiable society; and for these benefits I will impart a secret to you, but which you must promise not to divulge; because, if you do, now that the warm weather is coming, when I expect to reap a good harvest from the crops of colic and bowel-complaints in children, they won't want my services. Now, you remember that the moment you said, the child was easier when it was laid on its stomach, or ceased crying to some extent when its belly rested on the arm, I lost all alarm, and took the sherry; because, my dear madam, if you take the simile I gave you of the pressure of the veterinary on the flanks of the colicky animal, you have all the arguments I could give to tell you that your child suffers nothing more than colic, and no inflammation. Moreover, if you observe the child, it will roll on its belly, or stretch and kick out its legs; while, if it had inflammation, like the horse, it would take great care not to touch its stomach, and would lie doubled up, because, by doing so, it would relieve the pain caused by the muscles of the abdomen pressing on the inflamed intestines. Now, place your hand on baby's

stomach; you see it is not very much hotter than in the natural condition; is it not so?"

"Yes, doctor; and now I plainly see that, if there was inflammation, there would be extra heat."

"Exactly, madam. And now I must go. Just give your baby a pinch of carbonate of soda, half a pinch of powdered ginger, and mix them in water, and add one drop of oil of peppermint. Give that to the child whenever these spasms, or pains, come on, and rub its little stomach well with the palm of the hand. And, as the hot weather is coming on, when these abdominal diseases predominate, and it is so necessary to be able to discriminate, I hope you will not forget what I have told you. (Not a drop more sherry, thank you.) Good morning, madam."

"What are you looking for, doctor?"

"I think I've dropped the fee, madam."

"Oh, dear, I really quite forgot it. I plainly perceive it was not you, doctor, that dropped the fee; it was I that did."

"Madam, 'parting is such sweet sorrow.' Of course, I do not now allude to the fee you are paying me; I allude to my own departure. [Good day, madam.]"

DEFORMITIES, AND THE VALUE OF GYMNASTICS.

“WELL, Mr. Bandylegs, how is your cough to-day?”

“What, doctor—Bandylegs? That is defamation of character. My name is Cruikshank.”

“Beg pardon, Mr. Crookedshanks—you mean *deformation* of your understandings.”

“Wish I could get rid of these nasty pins of mine. Is there no cure for them?”

“Yes, of course—get them amputated. If you had not passed that period of life when the tendons and ligaments have acquired their greatest tension and have become firmly developed, a cure could have been induced. Children’s limbs may be straightened no matter what the deformity—bandy-legs, knock-knees, club-foot, horse-foot, spinal complaints, pigeon-chest, or any other malformation.”

“What a bore! I am not so very old yet; perhaps you can do something for me, after all. It is absolutely distressing for me to walk through the streets—the boys actually play their tops between my legs.”

“It is no use, Mr. Cruikshank. You must abide

by it, and blame your parents, or the medical man who neglected you when a child. Frequently, these deformities are congenital; when the medical man bringing the child into the world could prevent those fearful sights we meet with in the streets, by a little gentle bending, or putting into proper position. Many club-feet are allowed to grow unsightly and incurable simply by that want of attention of the surgeon to the new-born baby. Often and most frequently, club-foot and many other deformities are brought on by convulsions during the time of teething—the nervous system becoming deranged, and leaving some nerves (generally those supplying parts of the legs or arms) defective; which, by causing weakness in one set of muscles, and leaving another set—generally the opposing ones—unaffected, at once produces deformity. Again, another cause for these deformities is the manner in which the child, if weak, holds its legs while lying in bed, or resting on the mother's knee."

"Then, according to that, it will be very difficult for you to ascertain how the child got deformed, and, consequently, how to effect a cure?"

"Not at all, sir. The treatment is the same in any case."

"Now, what does that consist in? Surely, medicine won't do it?"

“Of course not, though it is a valuable adjunct sometimes, in hardening the soft bones and tissue, which assist to produce the deformity; and, sometimes, in rousing the nervous system, or to strengthen the muscles. My modes of treating deformities of the feet and legs consist of two—either by the knife, or by mechanical tension, with steel support or india-rubber springs, strappings, medical exercises, galvanism, &c., &c. I only use the knife in very bad cases, or when desired to effect a SPEEDY cure. I am not in favour of dividing tendons by the knife, as often, though the deformity be cured, a paralysed state of the foot remains, which is worse than the original deformity.”

“One of my daughters holds herself so badly, doctor, that I have often thought she must have a deformity somewhere, either in the back or in the hips or legs. I should like you to look at her.”

“Very well, Mr. Cruikshank, I will. Where is she?”

“Anne, my dear, come here. The doctor wants you.”

“How do you do, Miss Anne? Why, how you stoop!”

“Oh, doctor, I cannot help it. I try to keep myself up, but I cannot, and 'ma is constantly grumbling with me.”

“Do you stand much on one leg—that is, bending one knee, while the other is stretched, to relieve your fatigued legs?”

“Yes, doctor, I generally stand on the left leg, and bend the right knee.”

“That is a bad habit, which you must avoid. If you persevere in it, you will have a deformed spine. Just take your dress off, and let us see if your back *has* already given way.”

“What a sight! I could not have believed it. Do you observe, Mr. Cruikshank, how the standing on one leg has already caused one side of the back to deviate? Look at the hollow at this side; look at that shoulder-blade how it protrudes! If you do not do something soon to Miss Cruikshank, she will be crooked for life.”

“Good gracious, doctor! what must we do? I would do anything to have the girl’s back grow up straight.”

“Well, she must take some strengthening medicine, and lie down flat on her back on the carpet two or three times a day for an hour. In the meantime, I will send my assistant to take measures for a slight support, that shall be so constructed as not to impede the muscles from acting, and not be conspicuous either. Besides that, she will have to do some exercises, similar to those represented by this diagram

(which I now draw before you), with, of course, some changes, in proper time and rhythm, according to a system long practised in England for these cases; and in six months time, by assiduous care and good health, she may be as straight again as ever she was."



"I say, doctor, what do you think is the cause of her deformity?"

"Oh, in her case, it is simply because she is very tall and thin. She's like a young high tree that bends to one side, and nothing but propping it up on the concave side will put it straight again. Short, thick-set girls are not so liable to these deviations of the back, simply because they have not so much to balance on their hips."

"Very well, doctor; nothing shall be wanting on our part to assist a speedy cure."

"Good, Mr. Cruikshank."

While on the subject of the causes of deformities in girls, I may draw your attention to a want of care on the part of schoolmistresses, namely, the unphysiological, unhealthful, I may say inhuman, practice of making the pupils say their lessons while standing,

or while sitting on forms without backs. I will give you a few remedies which the health of young ladies of sedentary habits require. A crooked posture, a leaning forward of the trunk, or pressing of the chest against a table, are the general faults which, at a girl's age, lay the foundation of bodily infirmities for life.

Observe, I will draw a figure.



In this case, the body is kept erect by this cross-bar being fixed to the table. The spine, you perceive, is perfectly free, the arms are resting on the table, and the feet are resting on a stool. The height of the chair should

be of such proportion as to allow the waist to be level with the table. This gets rid of any bad habit of stooping, accustoms the body to be held erect, and allows a free circulation of blood and air in the chest, thus avoiding the tendency for consumption, so prevalent in our rising young colonists.

Allow me to draw for you an easy means by which

you can likewise avoid these spinal deformities. Here it is.

Notice, you fix two hooks in any joist in the ceiling; to these you append two straps, to which are attached two rings. Observe, the young girl seems to have a pleasure in hanging on to the rings. She can swing herself about, lift herself up, and thus strengthen the muscles of the arms, chest, and back, and develope or open the chest again, allowing a free circulation in the same. Now, this is very simple, my friend, very inexpensive, and really is a pastime, and not a task, to our young friends.



“Well, doctor, that is, I think, the very desideratum, namely, to get at once a cure, and a pleasing one, for by the latter means you ensure the taking of the remedy. Now, this is a difficult thing in giving medicines.”

“Ah, my worthy friend, here is a very simple means of amusing, and yet removing the tendency of your children, who, I notice, are scrofulously inclined. Get two broom-handles, and fix, a foot from the ground, two pieces of wood, for the feet to rest on, and let your children walk about on them. Here is

a plain drawing for you, by which you will at once comprehend the matter. It's very simple, you see,



when you know it, just like Columbus and the egg. And, now, as I cannot stop longer, and as I shall expect to give you a few more simple means of treating your children, I will reserve what I have to say for my next visit."

"Please, remember, my dear sir, that if you wish your child to be cured, you must not rely in these cases alone on 'doctor's

stuff,' on gymnastics, or the medical man's skill, either as adviser or operator; but you must depend as much as possible on out-of-door exercise and cold bathing; the latter especially; in fact, the best thing you can do is to take any amount of cold water, both outside as well as inside the body. Another thing also most material to the cure is a good temper; let the mind be thoroughly in harmony with the body. In scientific words, let the patient be treated as much psychologically as physically, and if there is an opportunity for change of

air, say from town to country, or *vice versa*, as, for instance, from the bush to the medical man in town, who devotes himself to this disease, then the very change is half the cure; but, as I said before, I will defer further remarks to my next number."

"Good day, doctor. I'll pay you your fee next time you call."

"Ugh! Good day, sir." [Exit doctor, looking glum.]



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